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**BOEING REALTY CORPORATION  
FORMER C-6 FACILITY  
LOS ANGELES, CALIFORNIA**

**WELL DESTRUCTION REPORT**

**GROUNDWATER MONITORING WELL BL-1**

---

**To:** Mr. Brian Mossman  
Boeing Realty Corporation  
3855 Lakewood Blvd.  
Building 1A MC D001-0097  
Long Beach, CA 90846

**From:** Haley & Aldrich, Inc.

**Date:** February 11, 2002

**Re:** Well Destruction Report, Groundwater Monitoring Well BL-1, Boeing Realty Corporation, Former C-6 Facility, Los Angeles, California

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Haley & Aldrich, Inc. is herein providing this groundwater monitoring well destruction report to summarize the destruction and final laboratory results from the groundwater monitoring well BL-1. Groundwater monitoring well BL-1 was located along the western boundary on Parcel B of the Boeing Realty Corporation's (BRC's) Former C-6 Facility in Los Angeles, California (Site) as shown on Figures 1 and 2.

**INTRODUCTION**

Groundwater monitoring well BL-1 was installed on February 2, 1999, by Arcadis Geraghty & Miller (Arcadis) as part of an off-site groundwater characterization program of the former International Light Metals (ILM) property immediately west of the Site. Groundwater monitoring well BL-1 was constructed of 2-inch diameter Schedule-40 PVC screen and casing, extended to a depth of approximately 81.5 feet, and had a screened interval from approximately 61.5 to 81.5 feet below ground surface (bgs).

The Department of Toxic Substances Control (DTSC) is the lead environmental agency for activities at the ILM facility. TRC, the ILM property environmental contractor, submitted a letter to the DTSC on January 10, 2002, notifying the DTSC of the closure of groundwater monitoring well BL-1. TRC reported that "the well will be closed according to the previously approved procedures in our letter dated December 28, 1999 and the DTSC's approval letter dated January 5, 2000." Copies of the two TRC letters and the DTSC's approval letter are included as Appendix A.

## FIELD ACTIVITIES

The scope of work consisted of obtaining a permit, monitoring and sampling groundwater monitoring well BL-1, submitting the groundwater sample to the laboratory for analysis, and well destruction activities. These tasks are discussed below.

Well destruction activities were performed on January 15 and 16, 2002 under a permit issued by the Los Angeles County Department of Health Services (DHS).

### Groundwater Monitoring and Sampling

TAIT Environmental Management, Inc. (Tait), BRC's groundwater monitoring and sampling subcontractor, gauged and sampled BL-1 on January 14, 2002. The water level was gauged against the top of the well casing to the nearest 0.01-foot using an electronic water level indicator. The following information was recorded.

Well No.	Top of Casing Elevation (feet above MSL)	Depth to Water (feet below top of casing)	Groundwater Elevation (feet above MSL)
BL-1	58.34	70.81	-12.47

After the water level was gauged, the groundwater monitoring well was purged using a submersible pump. Purged water was monitored in the field for electronic conductivity, temperature, and pH. Three borehole volumes of water (approximately 6 gallons) were purged from BL-1 and placed in a Department of Transportation (DOT) approved 55-gallon drum. The groundwater monitoring and sampling data sheet is included as Appendix B.

Upon completion of well purging, groundwater samples (one primary groundwater sample, one equipment blank and one trip blank) were collected using a disposable bailer with a bottom-emptying device. Ten 40-ml VOA bottles were filled and placed in a cooler with ice and transported under standard chain-of-custody procedures to Severn Trent Laboratories (STL) in Santa Ana, California for analysis. Groundwater samples were analyzed for volatile organic compounds (VOCs), including TCE, by EPA Method 8260B. The primary groundwater sample was also analyzed for hexavalent chromium by EPA Method 7196. Groundwater analytical results are included in Appendix C.

### Groundwater Sampling Results

Based on the results of the laboratory analyses of groundwater samples collected from BL-1, concentrations of the two primary compounds of potential concern found at the ILM facility are summarized in the following table. Appendix D contains a copy of the laboratory analytical report.

Analyte	Concentration in BL-1	Units
Hexavalent chromium	< 0.02	mg/l
Trichloroethene	1.8	µg/l

mg/l = milligrams per liter

µg/l = micrograms per liter

## Well Destruction

West Hazmat Drilling, Inc. (WHD) was contracted by Haley & Aldrich to destroy the well. The 2-inch PVC casing and screen was pulled out of the borehole (intact). The existing borehole was destroyed by overdrilling the grout and sand pack with an 11 ¼ -inch outside diameter (OD) auger to a total depth of approximately 85 feet bgs. The materials recovered during drilling were transferred into a roll-off bin for temporary onsite storage pending final disposition.

A photoionization detector (PID) was used during the fieldwork to monitor the level of VOCs present in soil cuttings and the breathing zone. The PID used for this investigation was a RAE Systems MiniRAE Plus with a 10.6 eV lamp. The unit was calibrated on January 15, 2002 using a 97 parts per million isobutylene in air mixture. PID readings did not exceed 0.5 parts per million (ppm).

Following the overdrilling, the borehole was grouted with a mixture of approximately 5 bags (94 pounds each) of Portland cement per 40 gallons of water; for a total grout volume of approximately 550 gallons. During grout placement, a 1.5-inch diameter tremie pipe was placed at the bottom of the 11 ¼ -inch OD auger and grout was placed in 20-foot lifts from the total depth to approximately 10 feet bgs. The borehole was filled from 10 feet bgs to 5 feet bgs with Redi-mix concrete. The following observations were recorded during the destruction activities:

### Well Destruction Observations for BL-1

Overdrilling Observations	BL-1
Original Depth of Well, feet (height above ground, feet)	81.5 (2.5)
Depth of overdrilling (feet)	85
Blank casing removed (condition) in feet	64 (intact)
Screened casing removed (condition) in feet	20 (intact)
Auger depth before cuttings observed, feet bgs	0
Bentonite – grout/sand mix removed, cubic yards	Approximately 3
Backfilling Observations	
Backfill mixture, Portland (bags)/water (gallons)	50/440
Total quantity of Portland used (bags)	50
Total Quantity of Red-mix used (bags)	Approximately 5

A well decommissioning report is included in Appendix C.

## WASTE STORAGE, HAULING AND DISPOSAL

Purge and decontamination water from the groundwater sampling and well destruction activities was stored in four 55-gallon drums. Waste from the well destruction activities (sand pack and sealing materials) was contained in a roll-off bin. One soil sample was collected from the bin (BL-1-70' [the laboratory report designation is BL-1-10]) and analyzed for Title 22 metals by EPA Methods 6010B and 7471, VOCs by EPA Method 8260B, total petroleum hydrocarbons (TPH) by EPA Method 8015B and polycyclic aromatic hydrocarbons (PAHs) by EPA Method 8310. Title 22 metals, VOCs, TPH and PAHs were not detected in soil sample BL-1-70'. The analytical report for this sample is also included in Appendix D. The soil and wastewater are pending disposition by BRC.

February 11, 2002

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Should you have any questions concerning the contents of this memorandum or require additional information, please contact either of the undersigned.

Sincerely yours,  
Haley & Aldrich, Inc.

Richard M. Farson, PE  
Project Engineer



Scott P. Zachary  
Project Manager

Attachments:

Figure 1 - Site Location Map

Figure 2 - BL-1 Location Map

Appendix A - TRC and DTSC Letters

Appendix B - Groundwater Sampling Data Sheet

Appendix C - Well Decommissioning Report

Appendix D - Laboratory Report & Chain of Custody



Boeing Realty Corporation  
3760 Kilroy Airport Way, Suite 500  
Long Beach, CA. 90806  
Stephanie Sibbett  
Direct (562) 593-8623  
Fax (562) 593-8140

## TRANSMITTAL LETTER

**To:** Mr. Ron Giraudi

**Company:** TRC Solutions

**Address:** 21 Technology Drive

Irvine, CA 92618

**Phone:** 949-727-9336

**Re:** Well Destruction Report, Groundwater Monitoring Well BL-1 – with revised page from App. C

**Date:** Feb 20, 2002

**CC:**

**Urgent**     **XFor Review**     **Please Comment**     **Please Reply**     **For Your Files**

Ron,

Enclosed please find the following:

- Well Destruction Report, Groundwater Monitoring Well BL-1, Haley & Aldrich, 2/11/02 with revised page from Appendix C

Please CC me on your transmittal letter to DTSC.

If you have any questions, please contact me at 562-593-8623.

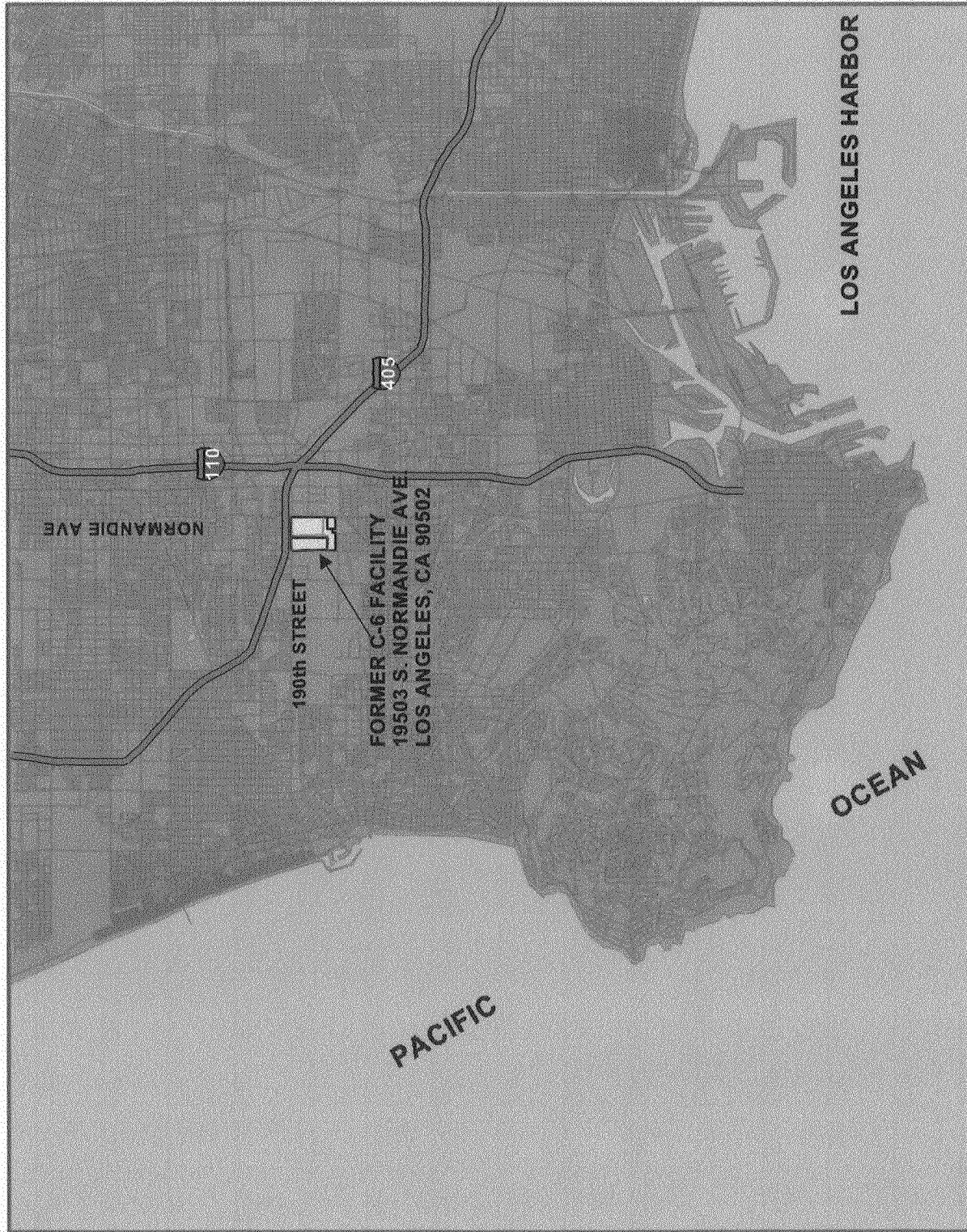
Regards,

Stephanie Sibbett

Figures

## **FIGURES**

**Figure 1**  
**Site Location Map**  
Boeing Reality Corporation  
Former C-6 Facility  
Los Angeles, California





Appendix A

**APPENDIX A**  
**TRC AND DTSC LETTERS**



January 10, 2002

Project No. 30779 (99-200)

Ms. Chia Rin Yen  
Hazardous Substances Scientist  
Department of Toxic Substances Control  
1011 North Grandview Avenue  
Glendale, California 91201

Notification of Offsite Well Closure (Well BL-1)  
Former International Light Metals Facility  
Lockheed Martin Corporation  
Torrance, California

Dear Ms. Yen:

Pursuant to our e-mail on Thursday, January 10, 2002, this letter is to notify the Department of Toxic Substances Control (DTSC) of the plans to close one additional offsite well associated with the Ground Water RCRA Facility Investigation (GWRFI) at the former International Light Metals (ILM) facility in Torrance, California.

Currently, there are two (2) remaining temporary offsite ground water monitoring wells on the former Boeing Realty Corporation (BRC) property located immediately to the east of the former ILM facility. Eight (8) offsite wells were originally installed in February 1999. However, the former offsite property owner, BRC, has sold the property, and six of the wells (Wells BL-2, BL-4, -5, -6, -7 and -8; see attached Figure 1) were located in the planned "footprint" of buildings or other restricted areas to be developed. For those reasons, TRC requested and received the DTSC's approval to close those ground water monitoring wells (the wells were closed in January and May 2000 and May and June 2001).

One additional well, BL-1, is in the location of a building for which construction is starting (property owned by King's Hawaiian). Therefore, this well will be closed on January 15, 2002. The well will be closed according to the previously approved procedures in our letter dated December 28, 1999 and the DTSC's approval letter dated January 5, 2000. One exception will be the grout seal used to backfill the well boring after overdrilling will be a neat cement rather than a bentonite/cement mixture.

Please call us if you have any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Ronald V. Giraudi".

Ronald V. Giraudi, REA II 20054  
Project Director

RVG/SR:rw  
Attachment

cc: Yolanda Garza, DTSC  
William Rowe, DTSC  
John Geroch, California RWQCB - Los Angeles Region  
Jennifer Stevens, Lockheed Martin Corporation  
Mario Stavale, Boeing Realty Corporation  
Stephanie Sibbett, Boeing Realty Corporation



## Department of Toxic Substances Control

PVS  
FVE

Winston H. Hickox  
Agency Secretary  
California Environmental  
Protection Agency

Edwin F. Lowry, Director  
1011 N. Grandview Avenue  
Glendale, California 91201

Gray Davis  
Governor

January 5, 2000

Mr. Ronald Giraudi  
TRC Environmental Solutions, Inc.  
21 Technology Drive  
Irvine, California 92618

CLOSURE OF OFFSITE WELLS, INTERNATIONAL LIGHT METALS, LOCKHEED  
MARTIN CORPORATION, TORRANCE, CALIFORNIA  
EPA ID NUMBER: CAD 030 398 622

Dear Mr. Giraudi:

The former International Light Metals (ILM) facility obtained an Acknowledgment of Termination and Agreement to Record Preservation and Reservation of Rights from the Department of Toxic Substances Control (DTSC) on May 13, 1999 indicating the contaminations to soil at the ILM had been successfully completed through the Corrective Action Administrative Agreement on Consent, Docket HWCA: 94-T0672. The continuing investigation and remediation of groundwater at the ILM site (and offsite) has been established through a Corrective Action Consent Agreement, Docket HWCA: P1-98/99-002 (Consent Agreement).

DTSC received a letter dated December 28, 1999 from TRC Environmental Solutions, Inc. (TRC) requesting that 4 of the 8 monitoring wells (BL-5, -6, -7 and -8) on the Boeing Realty Corporation (BRC) property be closed to facilitate the sales transaction of BRC. In the letter, you stated the reason for this request is that these 4 wells will be located in the footprint of buildings to be constructed by the prospective purchasers of the BRC property. DTSC will accommodate the property owner, BRC, by granting your request. Since the corrective action through the Consent Agreement is at the beginning stages, DTSC would like to further delineate the limitations of granting this request:

1. The RCRA Facility Investigation (RFI) Report was submitted by you on December 30, 1999. DTSC is in the process of reviewing and has not approved the RFI Report. Thus, RFI is considered open and not complete.

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Mr. Ronald Giraudi  
January 5, 2000  
Page 2

2. Since corrective action has not been fully evaluated, additional monitoring wells may be required and to be installed immediately if DTSC determines that further data is needed.
3. The mission of DTSC is to protect human health and the environment. At any time during the corrective action process, wells will be installed at any location for remediation and/or monitoring purpose. Therefore, DTSC cannot guarantee, but will attempt to compromise with the property owner on locations, if necessary.
4. All terms in the December 28, 1999 TRC letter will be adhered.
5. TRC will convey to BRC that the prospective new owner is expected to grant access to the property for the purpose of this corrective action.

The original project manager is back from her leave of absence, although Peter Chen still will be available during the transition. From now on please refer this project to Ms. Chia Rin Yen at (818) 551-2182 or e-mail at [cyen@dtsc.ca.gov](mailto:cyen@dtsc.ca.gov).

If you have any question, please contact Chia Rin Yen at the above contact resources.  
Sincerely,

*Yolanda M. Garza*  
Yolanda M. Garza  
Unit Chief  
Southern California Permitting Branch

cc: Mr. Mario Stavale  
Boeing Realty Corporation  
4060 Lakewood Boulevard, 6<sup>th</sup> Floor  
Long Beach, California 90808-1700

Mr. Augustine Anijuelo  
Regional Water Quality Control Board  
Los Angeles Region  
320 West 4<sup>th</sup> Street, Suite 200  
Los Angeles, California 90013

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Mr. Ronald Giraudi  
January 5, 2000  
Page 3

cc: Ms. Joann Omelas  
Integrated Environmental Services, Inc.  
22932 El Toro Road  
Lake Forest, California 92630

Mr. Will Rowe  
Department of Toxic Substances Control  
P.O. Box 806  
Sacramento, California 95812-0806

Ms. Chia Rin Yen  
Department of Toxic Substances Control  
1011 North Grandview Avenue  
Glendale, California 91201-2205

bfsfwl.cis



December 28, 1999

Project No. 99-200

Mr. Peter Chen  
Hazardous Substances Engineer  
Department of Toxic Substances Control  
1011 North Grandview Avenue  
Glendale, California 91201

Request for Closure of Offsite Wells  
Former International Light Metals Facility  
Lockheed Martin Corporation  
Torrance, California

Dear Mr. Chen:

Pursuant to our telephone conversation on Thursday, December 23, 1999, with yourself and Will Rowe, this letter is to request closure of offsite wells associated with the Ground Water RCRA Facility Investigation (GWRFI) at the former International Light Metals (ILM) facility in Torrance, California.

Currently, there are eight (8) temporary offsite ground water monitoring wells on the Boeing Realty Corporation (BRC) property located immediately to the east of the former ILM facility. These wells were installed in February 1999 and were sampled in March and July 1999. The data and results from these wells along with the onsite wells at the former ILM facility will be submitted to the DTSC in a GWRFI report next week.

However, the offsite property owner, BRC, is in the process of selling this property, and four of the wells (Wells BL-5, -6, -7 and -8; please refer to the enclosed figure) will be located in the "footprint" of buildings which will be constructed by purchasers of the property. For this reason, LMC requests the DTSC's approval to close these ground water monitoring wells. Should the DTSC determine, at a later time, that additional data is needed from monitoring well(s) in the general vicinity of the former Wells BL-5, -6, -7 and -8, new monitoring well(s) will be installed in the general proximity of the former well(s). However, these new well(s) shall be installed in areas outside of the proposed buildings which do not interfere with the new property owner's day-to-day operations (i.e., in parking lots or landscape/berm areas), as approved by the DTSC.

At the present time, BRC does not anticipate that Wells BL-1, -2, -3 or -4 will interfere with buildings which are anticipated to be constructed by the purchasers. However, should any of these wells be found to be in the "footprint" of a proposed building, then LMC, with appropriate notice to DTSC, would proceed to close the affected well(s). As in the case of Wells BL-5, -6, -7 and -8, should the DTSC determine that additional data is needed from wells located in general vicinity of former wells, BL-1, -2, -3 or -4, then new wells would be installed based upon the protocol set forth in the preceding paragraph.

As part of the closure procedure, the following additional work will be performed:

- Ground water level measurements will be collected from the eight (8) offsite wells prior to the closure of wells.

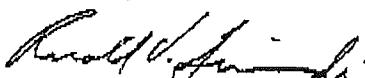
TRC Environmental Solutions, Inc.  
21 Technology Drive • Irvine, California 92618  
Telephone 714/27-9336 • Fax 714/27-7399  
949 949  
Customer-Focused Solutions

Mr. Peter Chen  
December 28, 1999  
Page 2

- For those wells to be closed, a ground water sample will be collected prior to closure and analyzed for trichloroethene (TCE) by EPA Method 8260 and for hexavalent chromium by EPA Method 7196.
- Wells will be closed by over drilling the well casing, screen, grout and sand pack. The wells will be backfilled by tremie placement of grout from the bottom of the borehole to within 10 feet of the surface (or as directed by the County of Los Angeles). The grout will be a mixture of 5 percent by weight bentonite (prehydrated) and cement. The mixture will be prepared as dry as possible. The upper 10 feet will be completed with concrete (or as directed by the County of Los Angeles).

Please review this information and call us with any questions and/or your approval.

Sincerely,



Ronald V. Giraudi, R.E.A.  
Project Director



Jeff Hensel, R.G. 5759  
Project Geologist

RVG/JH/RAL:mc

cc: Yolanda Garza, DTSC  
William Rowe, DTSC  
Augustine Anijuelo, California RWQCB - Los Angeles Region  
Mario Stavale, Boeing Realty Corporation  
Joann Ornelas, Integrated Environmental Services, Inc.

Appendix B

**APPENDIX B**  
**GROUNDWATER SAMPLING DATA SHEET**



TAIT Environmental Management, Inc.

Page 1 of 1

## GROUNDWATER SAMPLING DATA SHEET

WELL ID RC-1

PROJECT NAME	<u>Boeing Farmer C-6</u>			DATE	<u>1-14-02</u>						
PROJECT NO.	<u>CW-303</u>			PREPARED BY	<u>CB</u>						
AMBIENT AIR TEMPERATURE (°C)	<u>60.1</u>			WEATHER (SKY/WIND DIRECTION/SPEED)	<u>Sunny</u>						
MEASURING POINT (MP) ELEVATION (FMSL)	<u>700</u>										
WELL TD (FBMP)	SWL (FBMP)	WATER COL. (FT)	WELL DIAM. (IN)	GALLONS/FOOT			1 CASING VOL. (GAL)	3 CASING VOL. (GAL)			
				2	4	6					
<u>83.54</u>	<u>70.81</u>	<u>12.73</u>	<u>2</u>	<u>4</u>	<u>6</u>	<u>0.16</u>	<u>0.65</u>	<u>1.47</u>	<u>2.1</u>	<u>6.3</u>	
TOP OF SCREEN (FBMP)	BOTTOM OF SCREEN (FBMP)	LENGTH OF SCREEN (FBMP)	AIR MONITORING PID/FID (ppm)								
			BACKGROUND	VAULT	BREATHING						
TIME	FLOW RATE (GPM)	VOLUME/ TIME	CASING VOLUMES PURGED	VOLUME PURGED (GAL)	WATER LEVEL (FBMP)	T (°C)/ DO (mg/l)	pH/ Turbidity (NTU)	CONDUCTIVITY (umhos/cm)	DO (mg/l)/ ORP (+/-)	SALINITY (%)	PID/FID (ppm)
<u>16:00</u>	-		0	-	-	<u>23.1 / 10.78</u>	<u>6.95 / &gt;999</u>	<u>3.00 mS/cm</u>	-	-	-
<u>16:03</u>	<u>.66</u>	<u>2g/min</u>	<u>1</u>	<u>2</u>	-	<u>24 / 10.25</u>	<u>6.95 / &gt;999</u>	<u>3.14 mS/cm</u>	-	-	-
<u>16:09</u>	<u>.33</u>	<u>2g/min</u>	<u>2</u>	<u>2</u>	-	<u>24 / 11.57</u>	<u>6.94 / 357</u>	<u>2.99 mS/cm</u>	-	-	-
<u>16:14</u>	<u>.17</u>	<u>2g/min</u>	<u>3</u>	<u>2</u>	-	<u>23.8 /</u>	<u>6.92 / 351</u>	<u>3.05 mS/cm</u>	-	-	-
PURGING						SAMPLING					
PURGE START	PURGE END	AVERAGE Q	GALLONS PURGED	CASING VOLUMES PURGED	WL AT END OF PURGING (FBMP)	START SAMPLING TIME	STOP SAMPLING TIME	SAMPLE COLLECTION TIME			
<u>16:00</u>	<u>16:04</u>	<u>.46</u>	<u>6</u>	<u>3</u>	<u>70.81</u>	<u>16:27</u>	<u>16:30</u>	<u>16:30</u>	<u>16:30</u>		
RECOVERY DEPTH (FBMP) AND TIME <u>70.81</u>						WL AT SAMPLING (FBMP) <u>70.81</u>					

NOTES: (color, sand/silt content, wellhead/vault condition, factor affecting sample representativeness)

FMSL - Feet above/below sea level FBMP - Feet below measuring point

M:\\TEM2\\Clients\\BOEING\\Long Beach\\Confirmation &amp; West Ramp wells\\FIELD FORMS\\RC\_C-1 LONG BEACH\\GROUNDWATER SAMPLING DATA SHEET-1page.doc

Appendix C

**APPENDIX C**  
**WELL DECOMMISSIONING REPORT**

## WELL DECOMMISSIONING REPORT

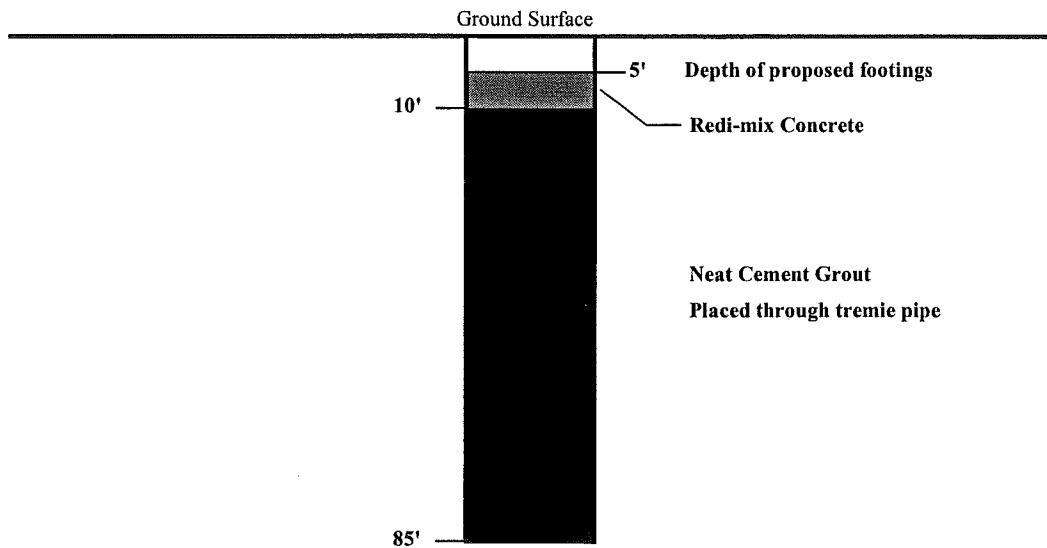
Well No.  
BL-1

PROJECT	Boeing Realty Corporation Former C-6 Facility	H&A FILE NO.	27285-012
LOCATION	Los Angeles, California	PROJECT MGR.	S.P. Zachary
CLIENT	Boeing Realty Corporation	FIELD REP.	T.S. Hammond
CONTRACTOR	West Hazmat Drilling	REMOVAL DATE	1/15/2002

Well Designation	BL-1				Explanation of Well Decommissioning Techniques:
Well Diameter	2-inch I.D. PVC				A. Shallow Wells:
Decommissioning Technique	Over Drill, Tremie Grout				
Depth to Groundwater	70.18 feet				
Total Depth of Well	81.5 feet				
	Cement (Lbs. - Bags*)	Additive (Lbs. - Gals.)	Water (Gals.)	Final Quantity (Gals.)	
Type	Portland Cement 5-bags	Hydrogel 1.5-lbs	40 gals	50 gals	
Manufacturer	Colton Manufacturing	Wyo-Ben			B. Deep Wells: Deep wells must be plugged using a bentonite/cement grout, which will fill the casing and annular space (see grout placement guidelines). The casing must be terminated 3 feet below the ground surface.
Quantity	50 bags	16.5 lbs	440 gals	550 gals	

\*1 Bag = 94 Lbs.

Sketch:



COMMENTS: The borehole for the well was drilled with 8 1/4-inch O.D. hollow-stem augers.

The destruction was performed by pulling the PVC well casing and screen, over-drilling with 11 1/4-inch O.D. hollow-stem augers, and grouting through a 1 1/2-inch tremie pipe placed on the bottom of the borehole through the augers.

The grout was allowed to settle over night and the borehole was topped off to 5-feet bgs with ready-mix concrete.

Appendix D

**APPENDIX D**  
**LABORATORY REPORT & CHAIN OF CUSTODY**

SEVERN  
TRENT  
SERVICES

January 21, 2002

STL LOT NUMBER: E2A140197  
NELAP Certification Number: 01118CA  
PO/CONTRACT: 05220-SEV001

STL Los Angeles  
1721 South Grand Avenue  
Santa Ana, CA 92705-4808

Tel: 714 258 8610  
Fax: 714 258 0921  
[www.stl-inc.com](http://www.stl-inc.com)

Mehmet Pehlivan  
Tait Environmental  
701 Park Center Drive  
Santa Ana, CA 92705

Dear Mr. Pehlivan,

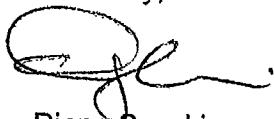
This report contains the analytical results for the three samples received under chain of custody by STL Los Angeles on January 14, 2002. These samples are associated with your BRC former C-6 Torrance Harbor Gateway project.

All applicable quality control procedures met method-specified acceptance criteria. See Project Receipt Checklist for container temperature and conditions. Temperature reading between 2 to 6 degrees Celsius is considered within acceptable criteria. Any matrix related anomaly is footnoted within the report.

STL Los Angeles certifies that the tests performed at our facility meet all NELAP requirements for parameters for which accreditation is required or available. The case narrative is an integral part of the report. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (714) 258-8610 extension 309.

Sincerely,



Diane Suzuki  
Project Manager

CC: Project File

Page 1 of 000035 total pages in this report.

000001

STL Los Angeles is a part of Severn Trent Laboratories, Inc.



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## ***Chain of Custody Record***

**SLEVERN  
TRENT  
SERVICES**

Severn Trent Laboratories, Ltd.

STL-4124 (0700)

Client <b>Tat Environmental Management</b>			Project Manager <b>Mehmet Pehlivan</b>								Date <b>1-14-02</b>	Chain of Custody Number <b>050086</b>						
Address <b>701 N. Parkcenter Drive</b>			Telephone Number (Area Code)/Fax Number <b>714-560-8613</b>								Lab Number <b>EZA140197</b>	Page <b>1</b> of <b>1</b>						
City <b>Santa Ana</b>	State <b>CA</b>	Zip Code <b>92705</b>	Site Contact <b>Mehmet P.</b>		Lab Contact <b>Diane Suzuki</b>		Analysis (Attach list if more space is needed)						Special Instructions/Conditions of Receipt					
Project Name and Location (State) <b>Former C-6 Torrance</b>			Carrier/Waybill Number <b>EM2303</b>															
Contract/Purchase Order/Quote No.			Matrix			Containers & Preservatives												
Sample I.D. No. and Description (Containers for each sample may be combined on one line)			Date	Time	Air	Aqueous	Sed.	Soil	Unpres.	H <sub>2</sub> SO <sub>4</sub>	HNO <sub>3</sub>	HCl	NaOH	ZnAc/ NaOH	EPAs	PZC/B	GPA	7196
BLL_011402_1630			1-14-02	16:30	X					3	X				X			
BLL_011402_1630			1-14-02	16:30	X					3	X				X			
BLL_011402_0001			1-14-02	15:15	X					3	X				X			
BLL_011402_0001 (trip)			1-14-02	-	X					3	X				X			
Possible Hazard Identification			Sample Disposal												(A fee may be assessed if samples are retained longer than 3 months)			
<input checked="" type="checkbox"/> Non-Hazard	<input type="checkbox"/> Flammable	<input type="checkbox"/> Skin Irritant	<input type="checkbox"/> Poison B	<input type="checkbox"/> Unknown	<input type="checkbox"/> Return To Client	<input type="checkbox"/> Disposal By Lab	<input type="checkbox"/> Archive For											
Turn Around Time Required															QC Requirements (Specify)			
<input type="checkbox"/> 24 Hours <input type="checkbox"/> 48 Hours <input type="checkbox"/> 7 Days <input checked="" type="checkbox"/> 14 Days <input type="checkbox"/> 21 Days <input type="checkbox"/> Other																		
1. Relinquished By <b>M. P. Bachman</b>			Date <b>1-14-02</b>	Time <b>1915</b>	1. Received By <b>R. S.</b>			Date <b>1-14-02</b>	Time <b>1915</b>									
2. Relinquished By			Date	Time	2. Received By <b>R. S.</b>			Date	Time									
3. Relinquished By			Date	Time	3. Received By			Date	Time									
Comments																		

**DISTRIBUTION:** WHITE - Stays with the Sample; CANARY - Returned to Client with Report; PINK - Field Copy

Date: 11/11/04

Quantums Lot #: EZA140197  
Client Name: TATT  
Received by: Royce S.  
Delivered by :  Client  Airborne  Fed  
 UPS  DES  Other

Quote #: 40334

Project: Boeing C-9 Torrance

Date/Time Received: 1/14/02 19:15

DHL       In-House Courier       Rev B.

\_\_\_\_\_. 1974. May 3.

Initial / Date

Custody Seal Status:  Intact       Broken       None ..... AR 1/14/02

Custody Seal #(s): \_\_\_\_\_  No Seal # .....  
\_\_\_\_\_

Sample Container(s):  STL-LA     Client     N/A .....

Temperature(s) (Cooler/blank) in °C: 4.3 Correction factor-0.1°C(Corrected Temp.) 4.22

Thermometer Used : ID: B      IR (Infra-red)      Digital (Probe)

**Samples:**  Intact  Broken  Other

No  Yes (See Clauseau)

INO  Yes (See Clouseau) .....

Labeled by . . . . .

Labeling checked by .....

Turn Around Time:  RUSH-24HR  RUSH-48HR  RUSH-72HR  NORMAL

Turn Around Time:  RUSH-24HR  RUSH-48HR  RUSH-72HR  NORMAL

Short-Hold Notification:  Ph  Wet Chem  Metals (Filter/Pres)  Encore  N/A ...

Outside Analysis(es) (Test/Lab/Date Sent Out) : MOTTE

\*\*\*\*\* LEAVE NO BLANK SPACES ; USE N/A \*\*\*\*\*

h:HCl na:Sodium Znna:Zinc Acetate/Sodium s: H2SO4 n:HNO3 n/f:HNO3-Field  
Hydroxide Hydroxide filtered n/f/L:HNO3-Lab filtered

CGJ:Clear Glass CGB:Clear Glass AGJ:Amber AGB:Amber Glass PB: Poly Bottle E:Encore  
Jar Bottle Glass Jar Bottle Sampler V:VOA SL:Sleeve

\* Number of VOA's w/ Headspace present

LOGGED BY/DATE: *Dwight* 1/14/02

REVIEWED BY/DATE:        /        / 1/14/02

PRG Ver. 1 051491 KRF

DANAG-4011UN1000013 sample Content E

000003

BOE-C6-0181534

SEVERN  
TRENT  
SERVICES

# Analytical Report

000004

# SAMPLE SUMMARY

E2A140197

<u>WO #</u>	<u>SAMPLE#</u>	<u>CLIENT SAMPLE ID</u>	<u>SAMPLED DATE</u>	<u>SAMP TIME</u>
ERMDC	001	BL1_011402_1630	01/14/02	16:30
ERMDD	002	BL1_011402_0004	01/14/02	15:15
ERMDE	003	BL1_011402_0001	01/14/02	

NOTE (S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

000005

# CLIENT DATA SUMMARY

Lot #: E2A140197

**TAIT ENVIRONMENTAL**  
 Boeing C-6/Tait EM2303  
 Project: 05160-SEV002

Date Reported: 1/21/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
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Client Sample ID: BL1\_011402\_1630

Sample #: 001 Date Sampled: 01/14/02 16:30 Date Received: 01/14/02 Matrix: WATER

VOLATILE ORGANICS BY GC/MS

Acetone	ND	10	ug/L	SW846 8260B	01/15/02	2015487
Benzene	1.1	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromochloromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromoform	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromomethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
Carbon tetrachloride	ND	0.50	ug/L	SW846 8260B	01/15/02	2015487
2-Butanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dichloroethane	ND	0.50	ug/L	SW846 8260B	01/15/02	2015487
Chloroethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
Chloroform	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Chloromethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dibromo-3-chloropropane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Iodomethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1-Dichloroethane	0.56 J	1.0	ug/L	SW846 8260B	01/15/02	2015487
cis-1,2-Dichloroethene	10	1.0	ug/L	SW846 8260B	01/15/02	2015487
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Vinyl chloride	6.8	0.50	ug/L	SW846 8260B	01/15/02	2015487
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
2-Hexanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Isopropylbenzene	0.38 J	1.0	ug/L	SW846 8260B	01/15/02	2015487
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487

(Continued on next page)

**000006**

# CLIENT DATA SUMMARY

Lot #: E2A140197

TAIT ENVIRONMENTAL  
Boeing C-6/Tait EM2303  
Project: 05160-SEV002

Date Reported: 1/21/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
<b>Client Sample ID: BL1_011402_1630</b>						
Sample #:	001	Date Sampled:	01/14/02 16:30	Date Received:	01/14/02	Matrix: WATER
VOLATILE ORGANICS BY GC/MS						
Methylene chloride	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Methyl tert-butyl ethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Styrene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Toluene	1.6	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,4-Trichloro- benzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,1-Trichloroethane	0.69 J	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Trichloroethene	1.8	1.0	ug/L	SW846 8260B	01/15/02	2015487
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Acrolein	ND	20	ug/L	SW846 8260B	01/15/02	2015487
Acrylonitrile	ND	20	ug/L	SW846 8260B	01/15/02	2015487
Vinyl acetate	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Tetrahydrofuran	ND	10	ug/L	SW846 8260B	01/15/02	2015487
2-Chloroethyl vinyl et	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Bromofluorobenzene	96		%	SW846 8260B	01/15/02	2015487
1,2-Dichloroethane-d4	118		%	SW846 8260B	01/15/02	2015487
Toluene-d8	102		%	SW846 8260B	01/15/02	2015487

J Estimated result. Result is less than RL.

## HEXAVALENT CHROMIUM

Hexavalent Chromium	ND	0.020	mg/L	SW846 7196A	01/15/02	2015224
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(Continued on next page)

**000007**

# CLIENT DATA SUMMARY

Lot #: E2A140197

**TAIT ENVIRONMENTAL**  
 Boeing C-6/Tait EM2303  
 Project: 05160-SEV002

Date Reported: 1/21/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
<b>Client Sample ID: BL1_011402_0004</b>						
Sample #: 002 Date Sampled: 01/14/02 15:15 Date Received: 01/14/02 Matrix: WATER						
<b>VOLATILE ORGANICS BY GC/MS</b>						
Acetone	ND	10	ug/L	SW846 8260B	01/15/02	2015487
Benzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromoform	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromomethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
Carbon tetrachloride	ND	0.50	ug/L	SW846 8260B	01/15/02	2015487
2-Butanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dichloroethane	ND	0.50	ug/L	SW846 8260B	01/15/02	2015487
Chloroethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
Chloroform	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Chloromethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dibromo-3-chloropropane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Iodomethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Vinyl chloride	ND	0.50	ug/L	SW846 8260B	01/15/02	2015487
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
2-Hexanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Methylene chloride	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487

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**000008**

# CLIENT DATA SUMMARY

Lot #: E2A140197

TAIT ENVIRONMENTAL  
Boeing C-6/Tait EM2303  
Project: 05160-SEV002

Date Reported: 1/21/02

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-ANALYSIS DATE</u>	<u>PREP BATCH #</u>
<b>Client Sample ID: BL1_011402_0004</b>						
Sample #:	002	Date Sampled:	01/14/02 15:15	Date Received:	01/14/02	Matrix: WATER
VOLATILE ORGANICS BY GC/MS						
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Methyl tert-butyl ethe	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Styrene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,1,2-Tetrachloroeth	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2,2-Tetrachloroeth	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Toluene	0.32 J	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,4-Trichloro- benzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Trichloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2-Trichlorotrifluo ethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Acrolein	ND	20	ug/L	SW846 8260B	01/15/02	2015487
Acrylonitrile	ND	20	ug/L	SW846 8260B	01/15/02	2015487
Vinyl acetate	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Tetrahydrofuran	ND	10	ug/L	SW846 8260B	01/15/02	2015487
2-Chloroethyl vinyl et	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Bromofluorobenzene	92		%	SW846 8260B	01/15/02	2015487
1,2-Dichloroethane-d4	109		%	SW846 8260B	01/15/02	2015487
Toluene-d8	99		%	SW846 8260B	01/15/02	2015487

J Estimated result. Result is less than RL.

Client Sample ID: BL1\_011402\_0001

Sample #: 003 Date Sampled: 01/14/02 Date Received: 01/14/02 Matrix: WATER

VOLATILE ORGANICS BY GC/MS

Acetone	ND	10	ug/L	SW846 8260B	01/15/02	2015487
Benzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487

(Continued on next page)

**000009**

# CLIENT DATA SUMMARY

Lot #: E2A140197

**TAIT ENVIRONMENTAL**  
 Boeing C-6/Tait EM2303  
 Project: 05160-SEV002

Date Reported: 1/21/02

<u>PARAMETER</u>	<u>RESULT</u>	<u>RL</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION-</u> <u>ANALYSIS</u>	<u>PREP</u> <u>BATCH #</u>
<b>Client Sample ID: BL1_011402_0001</b>						
Sample #:	003	Date Sampled:	01/14/02	Date Received:	01/14/02	Matrix: WATER
VOLATILE ORGANICS BY GC/MS						
Bromochloromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromoform	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromomethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
Carbon tetrachloride	ND	0.50	ug/L	SW846 8260B	01/15/02	2015487
2-Butanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Carbon disulfide	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Chlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dichloroethane	ND	0.50	ug/L	SW846 8260B	01/15/02	2015487
Chloroethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
Chloroform	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Chloromethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dibromo-3-chloropropane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Iodomethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Vinyl chloride	ND	0.50	ug/L	SW846 8260B	01/15/02	2015487
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Ethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
2-Hexanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Methylene chloride	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Methyl tert-butyl ether	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487

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**000010**

# CLIENT DATA SUMMARY

**TAIT ENVIRONMENTAL**  
 Boeing C-6/Tait EM2303  
 Project: 05160-SEV002

Lot #: E2A140197

Date Reported: 1/21/02

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
<b>Client Sample ID: BL1_011402_0001</b>						
Sample #: 003      Date Sampled: 01/14/02      Date Received: 01/14/02      Matrix: WATER						
<b>VOLATILE ORGANICS BY GC/MS</b>						
Styrene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,1,2-Tetrachloroeth	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2,2-Tetrachloroeth	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Toluene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,4-Trichloro- benzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Trichloroethene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,1,2-Trichlorotrifluo- ethane	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Xylenes (total)	ND	1.0	ug/L	SW846 8260B	01/15/02	2015487
Acrolein	ND	20	ug/L	SW846 8260B	01/15/02	2015487
Acrylonitrile	ND	20	ug/L	SW846 8260B	01/15/02	2015487
Vinyl acetate	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Tetrahydrofuran	ND	10	ug/L	SW846 8260B	01/15/02	2015487
2-Chloroethyl vinyl et	ND	5.0	ug/L	SW846 8260B	01/15/02	2015487
Bromofluorobenzene	94	%		SW846 8260B	01/15/02	2015487
1,2-Dichloroethane-d4	114	%		SW846 8260B	01/15/02	2015487
Toluene-d8	102	%		SW846 8260B	01/15/02	2015487

**000011**

## TAIT ENVIRONMENTAL

Client Sample ID: BL1\_011402\_1630

## GC/MS Volatiles

Lot-Sample #....: E2A140197-001 Work Order #....: ERMDC1AC Matrix.....: WATER  
 Date Sampled...: 01/14/02 16:30 Date Received...: 01/14/02 19:15 MS Run #.....: 2015275  
 Prep Date.....: 01/15/02 Analysis Date...: 01/15/02  
 Prep Batch #....: 2015487 Analysis Time...: 17:35  
 Dilution Factor: 1  
 Analyst ID.....: 015590 Instrument ID...: MSC  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	3.0
Benzene	1.1	1.0	ug/L	0.30
Bromobenzene	ND	1.0	ug/L	0.30
Bromochloromethane	ND	1.0	ug/L	0.30
Bromoform	ND	1.0	ug/L	0.30
Bromomethane	ND	2.0	ug/L	1.0
Carbon tetrachloride	ND	0.50	ug/L	0.30
2-Butanone	ND	5.0	ug/L	3.0
n-Butylbenzene	ND	1.0	ug/L	0.30
sec-Butylbenzene	ND	1.0	ug/L	0.30
tert-Butylbenzene	ND	1.0	ug/L	0.20
Carbon disulfide	ND	1.0	ug/L	0.30
Chlorobenzene	ND	1.0	ug/L	0.30
Dibromochloromethane	ND	1.0	ug/L	0.40
Dichlorodifluoromethane	ND	1.0	ug/L	0.40
Bromodichloromethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	0.50	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.30
Chloroform	ND	1.0	ug/L	0.30
Chloromethane	ND	2.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.30
4-Chlorotoluene	ND	1.0	ug/L	0.30
1,2-Dibromo-3-chloropropane	ND	2.0	ug/L	0.70
1,2-Dibromoethane	ND	1.0	ug/L	0.30
Iodomethane	ND	2.0	ug/L	1.0
1,2-Dichlorobenzene	ND	1.0	ug/L	0.30
1,3-Dichlorobenzene	ND	1.0	ug/L	0.30
1,4-Dichlorobenzene	ND	1.0	ug/L	0.30
1,1-Dichloroethane	0.56 J	1.0	ug/L	0.20
cis-1,2-Dichloroethene	10	1.0	ug/L	0.30
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.30
Vinyl chloride	6.8	0.50	ug/L	0.30
2,2-Dichloropropane	ND	1.0	ug/L	0.30
1,1-Dichloropropene	ND	1.0	ug/L	0.30
Ethylbenzene	ND	1.0	ug/L	0.20
Hexachlorobutadiene	ND	1.0	ug/L	0.30

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000012

## TAIT ENVIRONMENTAL

Client Sample ID: BL1\_011402\_1630

## GC/MS Volatiles

Lot-Sample #....: E2A140197-001 Work Order #....: ERMDC1AC Matrix.....: WATER

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
2-Hexanone	ND	5.0	ug/L	3.0
Isopropylbenzene	0.38 J	1.0	ug/L	0.30
p-Isopropyltoluene	ND	1.0	ug/L	0.30
Methylene chloride	ND	1.0	ug/L	0.30
4-Methyl-2-pentanone	ND	5.0	ug/L	3.0
Methyl tert-butyl ether	ND	1.0	ug/L	0.50
n-Propylbenzene	ND	1.0	ug/L	0.40
Styrene	ND	1.0	ug/L	0.30
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.30
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.40
Tetrachloroethene	ND	1.0	ug/L	0.30
Toluene	1.6	1.0	ug/L	0.30
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.40
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.30
1,1,1-Trichloroethane	0.69 J	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.30
Trichloroethene	1.8	1.0	ug/L	0.30
Trichlorofluoromethane	ND	2.0	ug/L	0.30
1,2,3-Trichloropropane	ND	1.0	ug/L	0.40
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L	0.40
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.30
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.20
Xylenes (total)	ND	1.0	ug/L	0.80
Acrolein	ND	20	ug/L	12
Acrylonitrile	ND	20	ug/L	10
Vinyl acetate	ND	5.0	ug/L	2.0
Tetrahydrofuran	ND	10	ug/L	2.0
2-Chloroethyl vinyl ether	ND	5.0	ug/L	2.0

SURROGATE	PERCENT RECOVERY	RECOVERY
		LIMITS
Bromofluorobenzene	96	(75 - 130)
1,2-Dichloroethane-d4	118	(65 - 135)
Toluene-d8	102	(80 - 130)

## NOTE(S) :

J Estimated result. Result is less than RL.

000013

## TAIT ENVIRONMENTAL

Client Sample ID: BL1\_011402\_0004

## GC/MS Volatiles

Lot-Sample #....: E2A140197-002 Work Order #....: ERMDD1AA Matrix.....: WATER  
 Date Sampled...: 01/14/02 15:15 Date Received...: 01/14/02 19:15 MS Run #.....: 2015275  
 Prep Date.....: 01/15/02 Analysis Date...: 01/15/02  
 Prep Batch #....: 2015487 Analysis Time...: 18:05  
 Dilution Factor: 1  
 Analyst ID.....: 015590 Instrument ID...: MSC  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	10	ug/L	3.0
Benzene	ND	1.0	ug/L	0.30
Bromobenzene	ND	1.0	ug/L	0.30
Bromochloromethane	ND	1.0	ug/L	0.30
Bromoform	ND	1.0	ug/L	0.30
Bromomethane	ND	2.0	ug/L	1.0
Carbon tetrachloride	ND	0.50	ug/L	0.30
2-Butanone	ND	5.0	ug/L	3.0
n-Butylbenzene	ND	1.0	ug/L	0.30
sec-Butylbenzene	ND	1.0	ug/L	0.30
tert-Butylbenzene	ND	1.0	ug/L	0.20
Carbon disulfide	ND	1.0	ug/L	0.30
Chlorobenzene	ND	1.0	ug/L	0.30
Dibromochloromethane	ND	1.0	ug/L	0.40
Dichlorodifluoromethane	ND	1.0	ug/L	0.40
Bromodichloromethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	0.50	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.30
Chloroform	ND	1.0	ug/L	0.30
Chloromethane	ND	2.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.30
4-Chlorotoluene	ND	1.0	ug/L	0.30
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	0.70
1,2-Dibromoethane	ND	1.0	ug/L	0.30
Iodomethane	ND	2.0	ug/L	1.0
1,2-Dichlorobenzene	ND	1.0	ug/L	0.30
1,3-Dichlorobenzene	ND	1.0	ug/L	0.30
1,4-Dichlorobenzene	ND	1.0	ug/L	0.30
1,1-Dichloroethane	ND	1.0	ug/L	0.20
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.30
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.30
Vinyl chloride	ND	0.50	ug/L	0.30
2,2-Dichloropropane	ND	1.0	ug/L	0.30
1,1-Dichloropropene	ND	1.0	ug/L	0.30
Ethylbenzene	ND	1.0	ug/L	0.20
Hexachlorobutadiene	ND	1.0	ug/L	0.30

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000014

## TAIT ENVIRONMENTAL

Client Sample ID: BL1\_011402\_0004

## GC/MS Volatiles

Lot-Sample #....: E2A140197-002 Work Order #....: ERMDD1AA Matrix.....: WATER

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
2-Hexanone	ND	5.0	ug/L	3.0
Isopropylbenzene	ND	1.0	ug/L	0.30
p-Isopropyltoluene	ND	1.0	ug/L	0.30
Methylene chloride	ND	1.0	ug/L	0.30
4-Methyl-2-pentanone	ND	5.0	ug/L	3.0
Methyl tert-butyl ether	ND	1.0	ug/L	0.50
n-Propylbenzene	ND	1.0	ug/L	0.40
Styrene	ND	1.0	ug/L	0.30
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.30
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.40
Tetrachloroethene	ND	1.0	ug/L	0.30
Toluene	0.32 J	1.0	ug/L	0.30
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.40
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.30
1,1,1-Trichloroethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.30
Trichloroethene	ND	1.0	ug/L	0.30
Trichlorofluoromethane	ND	2.0	ug/L	0.30
1,2,3-Trichloropropane	ND	1.0	ug/L	0.40
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L	0.40
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.30
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.20
Xylenes (total)	ND	1.0	ug/L	0.80
Acrolein	ND	20	ug/L	12
Acrylonitrile	ND	20	ug/L	10
Vinyl acetate	ND	5.0	ug/L	2.0
Tetrahydrofuran	ND	10	ug/L	2.0
2-Chloroethyl vinyl ether	ND	5.0	ug/L	2.0

SURROGATE	PERCENT RECOVERY	RECOVERY
		LIMITS
Bromofluorobenzene	92	(75 - 130)
1,2-Dichloroethane-d4	109	(65 - 135)
Toluene-d8	99	(80 - 130)

NOTE (S) :

J Estimated result. Result is less than RL.

000015

## TAIT ENVIRONMENTAL

Client Sample ID: BL1\_011402\_0001

## GC/MS Volatiles

Lot-Sample #....: E2A140197-003    Work Order #....: ERMDE1AA    Matrix.....: WATER  
 Date Sampled...: 01/14/02    Date Received...: 01/14/02 19:15 MS Run #.....: 2015275  
 Prep Date.....: 01/15/02    Analysis Date...: 01/15/02  
 Prep Batch #....: 2015487    Analysis Time...: 17:06  
 Dilution Factor: 1  
 Analyst ID.....: 015590    Instrument ID...: MSC  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Acetone	ND	1.0	ug/L	3.0
Benzene	ND	1.0	ug/L	0.30
Bromobenzene	ND	1.0	ug/L	0.30
Bromochloromethane	ND	1.0	ug/L	0.30
Bromoform	ND	1.0	ug/L	0.30
Bromomethane	ND	2.0	ug/L	1.0
Carbon tetrachloride	ND	0.50	ug/L	0.30
2-Butanone	ND	5.0	ug/L	3.0
n-Butylbenzene	ND	1.0	ug/L	0.30
sec-Butylbenzene	ND	1.0	ug/L	0.30
tert-Butylbenzene	ND	1.0	ug/L	0.20
Carbon disulfide	ND	1.0	ug/L	0.30
Chlorobenzene	ND	1.0	ug/L	0.30
Dibromochloromethane	ND	1.0	ug/L	0.40
Dichlorodifluoromethane	ND	1.0	ug/L	0.40
Bromodichloromethane	ND	1.0	ug/L	0.30
1,2-Dichloroethane	ND	0.50	ug/L	0.40
Chloroethane	ND	2.0	ug/L	0.30
Chloroform	ND	1.0	ug/L	0.30
Chloromethane	ND	2.0	ug/L	0.30
2-Chlorotoluene	ND	1.0	ug/L	0.30
4-Chlorotoluene	ND	1.0	ug/L	0.30
1,2-Dibromo-3-chloro-propane	ND	2.0	ug/L	0.70
1,2-Dibromoethane	ND	1.0	ug/L	0.30
Iodomethane	ND	2.0	ug/L	1.0
1,2-Dichlorobenzene	ND	1.0	ug/L	0.30
1,3-Dichlorobenzene	ND	1.0	ug/L	0.30
1,4-Dichlorobenzene	ND	1.0	ug/L	0.30
1,1-Dichloroethane	ND	1.0	ug/L	0.20
cis-1,2-Dichloroethene	ND	1.0	ug/L	0.30
trans-1,2-Dichloroethene	ND	1.0	ug/L	0.30
Vinyl chloride	ND	0.50	ug/L	0.30
2,2-Dichloropropane	ND	1.0	ug/L	0.30
1,1-Dichloropropene	ND	1.0	ug/L	0.30
Ethylbenzene	ND	1.0	ug/L	0.20
Hexachlorobutadiene	ND	1.0	ug/L	0.30

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000016

## TAIT ENVIRONMENTAL

Client Sample ID: BL1\_011402\_0001

## GC/MS Volatiles

Lot-Sample #....: E2A140197-003 Work Order #....: ERMDE1AA Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
2-Hexanone	ND	5.0	ug/L	3.0
Isopropylbenzene	ND	1.0	ug/L	0.30
p-Isopropyltoluene	ND	1.0	ug/L	0.30
Methylene chloride	ND	1.0	ug/L	0.30
4-Methyl-2-pentanone	ND	5.0	ug/L	3.0
Methyl tert-butyl ether	ND	1.0	ug/L	0.50
n-Propylbenzene	ND	1.0	ug/L	0.40
Styrene	ND	1.0	ug/L	0.30
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	0.30
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	0.40
Tetrachloroethene	ND	1.0	ug/L	0.30
Toluene	ND	1.0	ug/L	0.30
1,2,3-Trichlorobenzene	ND	1.0	ug/L	0.40
1,2,4-Trichloro- benzene	ND	1.0	ug/L	0.30
1,1,1-Trichloroethane	ND	1.0	ug/L	0.20
1,1,2-Trichloroethane	ND	1.0	ug/L	0.30
Trichloroethene	ND	1.0	ug/L	0.30
Trichlorofluoromethane	ND	2.0	ug/L	0.30
1,2,3-Trichloropropane	ND	1.0	ug/L	0.40
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L	0.40
1,2,4-Trimethylbenzene	ND	1.0	ug/L	0.30
1,3,5-Trimethylbenzene	ND	1.0	ug/L	0.20
Xylenes (total)	ND	1.0	ug/L	0.80
Acrolein	ND	20	ug/L	12
Acrylonitrile	ND	20	ug/L	10
Vinyl acetate	ND	5.0	ug/L	2.0
Tetrahydrofuran	ND	10	ug/L	2.0
2-Chloroethyl vinyl ether	ND	5.0	ug/L	2.0

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Bromofluorobenzene	94	(75 - 130)
1,2-Dichloroethane-d4	114	(65 - 135)
Toluene-d8	102	(80 - 130)

000017

## TAIT ENVIRONMENTAL

Client Sample ID: BL1\_011402\_1630

## General Chemistry

Lot-Sample #....: E2A140197-001    Work Order #....: ERMDC                Matrix.....: WATER  
Date Sampled...: 01/14/02 16:30    Date Received...: 01/14/02 19:15

PARAMETER	RESULT	RL	UNITS	METHOD	PREPARATION-	PREP
					ANALYSIS DATE	BATCH #
Hexavalent Chromium	ND	0.020	mg/L	SW846 7196A	01/15/02	2015224
	Dilution Factor: 1			Analysis Time...: 09:34	Analyst ID.....: 000022	
	Instrument ID...: W17			MS Run #.....: 2015106	MDL.....: 0.010	

000018

SEVERN  
TRENT  
SERVICES

# QA/QC

000019

# QC DATA ASSOCIATION SUMMARY

E2A140197

## Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	WATER	SW846 7196A		2015224	2015106
	WATER	SW846 8260B		2015487	2015275
002	WATER	SW846 8260B		2015487	2015275
003	WATER	SW846 8260B		2015487	2015275

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## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #...: E2A140197      Work Order #...: ERPE01AA      Matrix.....: WATER  
 MB Lot-Sample #: E2A150000-487  
 Analysis Date..: 01/15/02      Prep Date.....: 01/15/02      Analysis Time..: 09:32  
 Dilution Factor: 1      Prep Batch #...: 2015487      Instrument ID..: MSC  
 Analyst ID.....: 015590

<u>PARAMETER</u>	<u>RESULT</u>	REPORTING		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Acetone	ND	10	ug/L	SW846 8260B
Benzene	ND	1.0	ug/L	SW846 8260B
Bromobenzene	ND	1.0	ug/L	SW846 8260B
Bromochloromethane	ND	1.0	ug/L	SW846 8260B
Bromoform	ND	1.0	ug/L	SW846 8260B
Bromomethane	ND	2.0	ug/L	SW846 8260B
Carbon tetrachloride	ND	0.50	ug/L	SW846 8260B
2-Butanone	ND	5.0	ug/L	SW846 8260B
n-Butylbenzene	ND	1.0	ug/L	SW846 8260B
sec-Butylbenzene	ND	1.0	ug/L	SW846 8260B
tert-Butylbenzene	ND	1.0	ug/L	SW846 8260B
Carbon disulfide	ND	1.0	ug/L	SW846 8260B
Chlorobenzene	ND	1.0	ug/L	SW846 8260B
Dibromochloromethane	ND	1.0	ug/L	SW846 8260B
Dichlorodifluoromethane	ND	1.0	ug/L	SW846 8260B
Bromodichloromethane	ND	1.0	ug/L	SW846 8260B
1,2-Dichloroethane	ND	0.50	ug/L	SW846 8260B
Chloroethane	ND	2.0	ug/L	SW846 8260B
Chloroform	ND	1.0	ug/L	SW846 8260B
Chloromethane	ND	2.0	ug/L	SW846 8260B
2-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
4-Chlorotoluene	ND	1.0	ug/L	SW846 8260B
1,2-Dibromo-3-chloro- propane	ND	2.0	ug/L	SW846 8260B
1,2-Dibromoethane	ND	1.0	ug/L	SW846 8260B
Iodomethane	ND	2.0	ug/L	SW846 8260B
1,2-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,3-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,4-Dichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,1-Dichloroethane	ND	1.0	ug/L	SW846 8260B
cis-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
trans-1,2-Dichloroethene	ND	1.0	ug/L	SW846 8260B
Vinyl chloride	ND	0.50	ug/L	SW846 8260B
2,2-Dichloropropane	ND	1.0	ug/L	SW846 8260B
1,1-Dichloropropene	ND	1.0	ug/L	SW846 8260B
Ethylbenzene	ND	1.0	ug/L	SW846 8260B
Hexachlorobutadiene	ND	1.0	ug/L	SW846 8260B
2-Hexanone	ND	5.0	ug/L	SW846 8260B
Isopropylbenzene	ND	1.0	ug/L	SW846 8260B
p-Isopropyltoluene	ND	1.0	ug/L	SW846 8260B

(Continued on next page)

000021

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #....: E2A140197

Work Order #....: ERPE01AA

Matrix.....: WATER

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Methylene chloride	ND	1.0	ug/L	SW846 8260B
4-Methyl-2-pentanone	ND	5.0	ug/L	SW846 8260B
Methyl tert-butyl ether	ND	1.0	ug/L	SW846 8260B
n-Propylbenzene	ND	1.0	ug/L	SW846 8260B
Styrene	ND	1.0	ug/L	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	1.0	ug/L	SW846 8260B
Tetrachloroethene	ND	1.0	ug/L	SW846 8260B
Toluene	ND	1.0	ug/L	SW846 8260B
1,2,3-Trichlorobenzene	ND	1.0	ug/L	SW846 8260B
1,2,4-Trichloro- benzene	ND	1.0	ug/L	SW846 8260B
1,1,1-Trichloroethane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichloroethane	ND	1.0	ug/L	SW846 8260B
Trichloroethene	ND	1.0	ug/L	SW846 8260B
Trichlorofluoromethane	ND	2.0	ug/L	SW846 8260B
1,2,3-Trichloropropane	ND	1.0	ug/L	SW846 8260B
1,1,2-Trichlorotrifluoro- ethane	ND	1.0	ug/L	SW846 8260B
1,2,4-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
1,3,5-Trimethylbenzene	ND	1.0	ug/L	SW846 8260B
Xylenes (total)	ND	1.0	ug/L	SW846 8260B
Acrolein	ND	20	ug/L	SW846 8260B
Acrylonitrile	ND	20	ug/L	SW846 8260B
Vinyl acetate	ND	5.0	ug/L	SW846 8260B
Tetrahydrofuran	ND	10	ug/L	SW846 8260B
2-Chloroethyl vinyl ether	ND	5.0	ug/L	SW846 8260B
<u>SURROGATE</u>		<u>PERCENT</u>	<u>RECOVERY</u>	
		<u>RECOVERY</u>	<u>LIMITS</u>	
Bromofluorobenzene	94	(75 - 130)		
1,2-Dichloroethane-d4	97	(65 - 135)		
Toluene-d8	106	(80 - 130)		

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000022

## METHOD BLANK REPORT

## General Chemistry

Client Lot #....: E2A140197

Matrix.....: WATER

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	PREP
		LIMIT	UNITS				
Hexavalent Chromium	ND	0.020	mg/L	Work Order #: ERM4W1AA Dilution Factor: 1 Analysis Time...: 09:32	SW846 7196A	01/15/02	2015224

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000023

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #....: E2A140197      Work Order #....: ERPE01AC      Matrix.....: WATER  
 LCS Lot-Sample#: E2A150000-487  
 Prep Date.....: 01/15/02      Analysis Date...: 01/15/02  
 Prep Batch #....: 2015487      Analysis Time...: 09:02  
 Dilution Factor: 1      Instrument ID...: MSC  
 Analyst ID.....: 015590

<u>PARAMETER</u>	<u>SPIKE</u>	<u>MEASURED</u>	<u>UNITS</u>	<u>PERCENT</u>	<u>METHOD</u>
Benzene	10.0	9.65	ug/L	96	SW846 8260B
1,1-Dichloroethene	10.0	9.86	ug/L	99	SW846 8260B
Chlorobenzene	10.0	10.5	ug/L	105	SW846 8260B
Toluene	10.0	10.2	ug/L	102	SW846 8260B
Trichloroethene	10.0	10.9	ug/L	109	SW846 8260B
<u>SURROGATE</u>		<u>AMOUNT</u>	<u>RECOVERY</u>	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene		104		(75 - 130)	
1,2-Dichloroethane-d4		110		(65 - 135)	
Toluene-d8		118		(80 - 130)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000024

## LABORATORY CONTROL SAMPLE DATA REPORT

## General Chemistry

Client Lot #....: E2A140197

Matrix.....: WATER

PARAMETER	SPIKE	MEASURED	PERCNT		PREPARATION-		PREP
	AMOUNT	AMOUNT	UNITS	RECVRY	METHOD	ANALYSIS DATE	BATCH #
Hexavalent Chromium			Work Order #: ERM4W1AC LCS Lot-Sample#: E2A150000-224				
	0.0500	0.0494	mg/L	99	SW846 7196A	01/15/02	2015224
			Dilution Factor:	1			
			Analysis Time..:	09:30	Analyst ID....: 000022	Instrument ID...: W17	

## NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000025

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Client Lot #....: E2A140197      Work Order #....: ERPE01AC      Matrix.....: WATER  
 LCS Lot-Sample#: E2A150000-487  
 Prep Date.....: 01/15/02      Analysis Date...: 01/15/02  
 Prep Batch #....: 2015487      Analysis Time...: 09:02  
 Dilution Factor: 1      Instrument ID...: MSC  
 Analyst ID.....: 015590

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>METHOD</u>
Benzene	96	(75 - 120)	<b>SW846</b> 8260B
1,1-Dichloroethene	99	(70 - 140)	<b>SW846</b> 8260B
Chlorobenzene	105	(75 - 120)	<b>SW846</b> 8260B
Toluene	102	(75 - 125)	<b>SW846</b> 8260B
Trichloroethene	109	(70 - 130)	<b>SW846</b> 8260B
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	104	(75 - 130)	
1,2-Dichloroethane-d4	110	(65 - 135)	
Toluene-d8	118	(80 - 130)	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000026

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #...: E2A140197

Matrix.....: WATER

PARAMETER	PERCENT	RECOVERY	METHOD	PREPARATION-	PREP
	RECOVERY	LIMITS		ANALYSIS DATE	BATCH #
Hexavalent Chromium		Work Order #: ERM4W1AC	LCS Lot-Sample#: E2A150000-224		
	99	(85 - 115)	SW846 7196A	01/15/02	2015224
		Dilution Factor: 1			
		Analysis Time..: 09:30	Analyst ID.....: 000022	Instrument ID..: W17	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000027

## MATRIX SPIKE SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #....: E2A140197      Work Order #....: ERLV61AD-MS      Matrix.....: WATER  
 MS Lot-Sample #: E2A140155-002      ERLV61AE-MSD  
 Date Sampled....: 01/09/02 09:30      Date Received...: 01/12/02 10:30      MS Run #.....: 2015275  
 Prep Date.....: 01/15/02      Analysis Date...: 01/15/02  
 Prep Batch #....: 2015487      Analysis Time...: 19:04  
 Dilution Factor: 1      Analyst ID.....: 015590      Instrument ID..: MSC

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT				
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD	METHOD	
Benzene	ND	10.0	9.19	ug/L	92		SW846 8260B	
	ND	10.0	9.06	ug/L	91	1.4	SW846 8260B	
1,1-Dichloroethene	ND	10.0	8.83	ug/L	88		SW846 8260B	
	ND	10.0	9.05	ug/L	90	2.5	SW846 8260B	
Chlorobenzene	ND	10.0	9.27	ug/L	93		SW846 8260B	
	ND	10.0	9.40	ug/L	94	1.4	SW846 8260B	
Toluene	ND	10.0	9.17	ug/L	92		SW846 8260B	
	ND	10.0	9.38	ug/L	94	2.3	SW846 8260B	
Trichloroethene	ND	10.0	10.2	ug/L	102		SW846 8260B	
	ND	10.0	10.2	ug/L	102	0.09	SW846 8260B	
<hr/>		<hr/>		<hr/>		<hr/>		
<hr/>		PERCENT		RECOVERY			<hr/>	
<hr/>		RECOVERY		LIMITS			<hr/>	
<hr/>		95		(75 - 130)			<hr/>	
<hr/>		105		(75 - 130)			<hr/>	
<hr/>		114		(65 - 135)			<hr/>	
<hr/>		118		(65 - 135)			<hr/>	
<hr/>		98		(80 - 130)			<hr/>	
<hr/>		109		(80 - 130)			<hr/>	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000028

## MATRIX SPIKE SAMPLE DATA REPORT

## General Chemistry

Client Lot #....: E2A140197

Matrix.....: WATER

Date Sampled...: 01/14/02 16:30 Date Received...: 01/14/02 19:15

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT			METHOD	PREPARATION-	PREP
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD		ANALYSIS DATE	BATCH #
Hexavalent Chromium			WO#:	ERMDC1AD-MS	/ERMDC1AE-MSD	MS	Lot-Sample #:	E2A140197-001	
	ND	0.0500	0.0484	mg/L	97		SW846	7196A	01/15/02 2015224
	ND	0.0500	0.0484	mg/L	97	0.0	SW846	7196A	01/15/02 2015224
			Dilution Factor:	1					
			Analysis Time...:	09:36		Instrument ID...:	W17		Analyst ID.....: 000022
			MS Run #.....:	2015106					

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000029

## MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Client Lot #...: E2A140197      Work Order #...: ERLV61AD-MS      Matrix.....: WATER  
 MS Lot-Sample #: E2A140155-002      ERLV61AE-MSD  
 Date Sampled...: 01/09/02 09:30      Date Received...: 01/12/02 10:30      MS Run #.....: 2015275  
 Prep Date.....: 01/15/02      Analysis Date...: 01/15/02  
 Prep Batch #...: 2015487      Analysis Time...: 19:04  
 Dilution Factor: 1      Analyst ID.....: 015590      Instrument ID..: MSC

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>RPD</u>	<u>LIMITS</u>	<u>METHOD</u>
	<u>RECOVERY</u>	<u>LIMITS</u>			
Benzene	92	(75 - 120)			SW846 8260B
	91	(75 - 120)	1.4	(0-25)	SW846 8260B
1,1-Dichloroethene	88	(70 - 140)			SW846 8260B
	90	(70 - 140)	2.5	(0-25)	SW846 8260B
Chlorobenzene	93	(75 - 120)			SW846 8260B
	94	(75 - 120)	1.4	(0-25)	SW846 8260B
Toluene	92	(75 - 125)			SW846 8260B
	94	(75 - 125)	2.3	(0-25)	SW846 8260B
Trichloroethene	102	(70 - 130)			SW846 8260B
	102	(70 - 130)	0.09	(0-25)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	95	(75 - 130)
	105	(75 - 130)
1,2-Dichloroethane-d4	114	(65 - 135)
	118	(65 - 135)
Toluene-d8	98	(80 - 130)
	109	(80 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000030

## MATRIX SPIKE SAMPLE EVALUATION REPORT

## General Chemistry

Client Lot #....: E2A140197

Matrix.....: WATER

Date Sampled...: 01/14/02 16:30 Date Received..: 01/14/02 19:15

PARAMETER	PERCENT	RECOVERY	RPD	METHOD	PREPARATION-	PREP
	RECOVERY	LIMITS	RPD		ANALYSIS DATE	BATCH #
Hexavalent Chromium			WO#:	ERMDC1AD-MS/ERMDC1AE-MSD	MS Lot-Sample #:	E2A140197-001
	97	(85 - 115)		SW846 7196A	01/15/02	2015224
	97	(85 - 115) 0.0 (0-20)		SW846 7196A	01/15/02	2015224
		Dilution Factor: 1				
			Analysis Time...: 09:36	Instrument ID...: W17		Analyst ID.....: 000022
			MS Run #.....: 2015106			

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000031

## MATRIX SPIKE SAMPLE DATA REPORT

## GC/MS Volatiles

Lot-Sample #....: E2A140197      Work Order #....: ERLV61AD      Matrix.....: WATER  
 MS Lot-Sample #: E2A140155-002  
 Date Sampled...: 01/09/02 09:30 Date Received...: 01/12/02 10:30  
 Prep Date.....: 01/15/02 Analysis Date...: 01/15/02  
 Prep Batch #....: 2015487 MS Run #.....: 2015275  
 Dilution Factor: 1 Analyst ID.....: 015590      Instrument ID..: MSC

<u>PARAMETER</u>	<u>SAMPLE SPIKE MEASRD</u>				<u>PERCENT</u>	<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMT</u>	<u>AMOUNT</u>	<u>UNITS</u>	<u>RECOVERY</u>	
Benzene	ND	10.0	9.19	ug/L	92	SW846 8260B
1,1-Dichloroethene	ND	10.0	8.83	ug/L	88	SW846 8260B
Chlorobenzene	ND	10.0	9.27	ug/L	93	SW846 8260B
Toluene	ND	10.0	9.17	ug/L	92	SW846 8260B
Trichloroethene	ND	10.0	10.2	ug/L	102	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>
	<u>RECOVERY</u>	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	95		(75 - 130)
1,2-Dichloroethane-d4	114		(65 - 135)
Toluene-d8	98		(80 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000032

## MATRIX SPIKE SAMPLE DATA REPORT

## General Chemistry

Client Lot #....: E2A140197

Matrix.....: WATER

Date Sampled....: 01/14/02 16:30 Date Received..: 01/14/02 19:15

PARAMETER	SAMPLE	SPIKE	MEASURED	UNITS	PERCENT	METHOD	PREPARATION-	PREP
	AMOUNT	AMT	AMOUNT		RECOVERY		ANALYSIS DATE	BATCH #
Hexavalent Chromium				Work Order #....:	ERMDC1AD	MS Lot-Sample #:	E2A140197-001	
	ND	0.050	0.0484	mg/L	97	SW846 7196A	01/15/02	2015224
				Dilution Factor:	1	Analysis Time...:	09:34	Instrument ID...: W17
				Analyst ID.....:	000022			
				MS Run #.....:	2015106			

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000033

## MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Lot-Sample #....: E2A140197      Work Order #....: ERLV61AD      Matrix.....: WATER  
 MS Lot-Sample #: E2A140155-002  
 Date Sampled...: 01/09/02 09:30 Date Received...: 01/12/02 10:30  
 Prep Date.....: 01/15/02 Analysis Date...: 01/15/02  
 Prep Batch #....: 2015487 MS Run #.....: 2015275  
 Dilution Factor: 1 Analyst ID....: 015590      Instrument ID...: MSC

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>METHOD</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	
Benzene	92	(75 - 120)	SW846 8260B
1,1-Dichloroethene	88	(70 - 140)	SW846 8260B
Chlorobenzene	93	(75 - 120)	SW846 8260B
Toluene	92	(75 - 125)	SW846 8260B
Trichloroethene	102	(70 - 130)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	
Bromofluorobenzene	95		(75 - 130)
1,2-Dichloroethane-d4	114		(65 - 135)
Toluene-d8	98		(80 - 130)

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000034

MATRIX SPIKE SAMPLE EVALUATION REPORT

General Chemistry

Client Lot #....: E2A140197

Matrix.....: WATER

Date Sampled....: 01/14/02 16:30 Date Received..: 01/14/02 19:15

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD	PREPARATION- ANALYSIS DATE	PREP BATCH #
Hexavalent Chromium	97	Work Order #....: ERMDCLAD (85 - 115)	SW846 7196A	MS Lot-Sample #: E2A140197-001 01/15/02	2015224
		Dilution Factor: 1		Analysis Time..: 09:34	Instrument ID...: W17
		Analyst ID.....: 000022			
		MS Run #.....: 2015106			

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000035

SEVERN  
TRENT  
SERVICES

January 21, 2002

STL LOT NUMBER: E2A150272  
NELAP Certification Number: 01118CA  
PO/CONTRACT: 05160-SEV002-S56

**STL Los Angeles**  
1721 South Grand Avenue  
Santa Ana, CA 92705-4808

Tel: 714 258 8610  
Fax: 714 258 0921  
[www.stl-inc.com](http://www.stl-inc.com)

Scott Zachary  
Haley & Aldrich Inc  
9040 Friars Road  
Suite 220  
San Diego, CA 92108

Dear Mr. Zachary,

This report contains the analytical results for the sample received under chain of custody by STL Los Angeles on January 15, 2002. This sample is associated with your BRC former C-6 Torrance Harbor Gateway project.

All applicable quality control procedures met method-specified acceptance criteria. See Project Receipt Checklist for container temperature and conditions. Temperature reading between 2 to 6 degrees Celsius is considered within acceptable criteria. Any matrix related anomaly is footnoted within the report.

STL Los Angeles certifies that the tests performed at our facility meet all NELAP requirements for parameters for which accreditation is required or available. The case narrative is an integral part of the report. This report shall not be reproduced except in full, without the written approval of the laboratory.

If you have any questions, please feel free to call me at (714) 258-8610 extension 309.

Sincerely,



Diane Suzuki  
Project Manager

CC: Project File

Page 1 of 000051 total pages in this report.

000001

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SEVERN  
TRENT  
SERVICES

# Analytical Report

000004

## EXECUTIVE SUMMARY - Detection Highlights

E2A150272

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL METHOD</u>
BL-1-10 01/15/02 11:00 001				
C6-C8	0.12 J	1.0	mg/kg	SW846 8015B
Mercury	0.033 B	0.10	mg/kg	SW846 7471A
Aluminum	3840	40.0	mg/kg	SW846 6010B
Arsenic	3.7	2.0	mg/kg	SW846 6010B
Barium	37.2	4.0	mg/kg	SW846 6010B
Chromium	14.6 J	2.0	mg/kg	SW846 6010B
Beryllium	0.32	1.0	mg/kg	SW846 6010B
Qualifiers: B,J,G				
Lead	2.7 J	1.0	mg/kg	SW846 6010B
Cobalt	1.8 B,G	10.0	mg/kg	SW846 6010B
Copper	4.2 B,J,G	5.0	mg/kg	SW846 6010B
Nickel	4.4 B,G	8.0	mg/kg	SW846 6010B
Vanadium	12.0	10.0	mg/kg	SW846 6010B
Zinc	12.5	4.0	mg/kg	SW846 6010B

000005

## METHODS SUMMARY

E2A150272

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
Extractable Petroleum Hydrocarbons	SW846 8015B	SANA AUTO-SHAKE
Inductively Coupled Plasma (ICP) Metals	SW846 6010B	SW846 3050B
Mercury in Solid Waste (Manual Cold-Vapor)	SW846 7471A	SW846 7471A
Polynuclear Aromatic Hydrocarbons by HPLC	SW846 8310	SW846 3550
Volatile Organics by GC/MS	SW846 8260B	SW846 5030
Volatile Petroleum Hydrocarbons	SW846 8015B	SW846 5030

**References:**

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

000006

# SAMPLE SUMMARY

E2A150272

WO #	SAMPLE#	CLIENT SAMPLE ID	SAMPLED DATE	SAMP TIME
ERN8M	001	BL-1-10	01/15/02	11:00

## NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

000007

## HALEY &amp; ALDRICH INC

Client Sample ID: BL-1-10

## GC Semivolatiles

Lot-Sample #....: E2A150272-001 Work Order #....: ERN8M1AA Matrix.....: SOLID  
 Date Sampled....: 01/15/02 11:00 Date Received...: 01/15/02 16:40 MS Run #.....: 2016128  
 Prep Date.....: 01/16/02 Analysis Date...: 01/18/02  
 Prep Batch #....: 2016317 Analysis Time...: 13:34  
 Dilution Factor: 1  
 Analyst ID.....: 356074 Instrument ID...: G02  
 Method.....: SW846 8015B

PARAMETER	REPORTING			
	RESULT	LIMIT	UNITS	MDL
C8-C9	ND	10	mg/kg	5.0
C10-C11	ND	10	mg/kg	5.0
C12-C13	ND	10	mg/kg	5.0
C14-C15	ND	10	mg/kg	5.0
C16-C17	ND	10	mg/kg	5.0
C18-C19	ND	10	mg/kg	5.0
C20-C23	ND	10	mg/kg	5.0
C24-C27	ND	10	mg/kg	5.0
C28-C31	ND	10	mg/kg	5.0
C32-C35	ND	10	mg/kg	5.0
C36-C39	ND	10	mg/kg	5.0
C40+	ND	10	mg/kg	5.0
Total Carbon Chain Range	ND	10	mg/kg	5.0
SURROGATE	PERCENT		RECOVERY	
	RECOVERY		LIMITS	
benzo(a)pyrene	90		(60 - 130)	

000008

## HALEY &amp; ALDRICH INC

Client Sample ID: BL-1-10

## GC Volatiles

Lot-Sample #....: E2A150272-001 Work Order #....: ERN8M1AC Matrix.....: SOLID  
 Date Sampled...: 01/15/02 11:00 Date Received...: 01/15/02 16:40 MS Run #.....: 2017163  
 Prep Date.....: 01/16/02 Analysis Date...: 01/16/02  
 Prep Batch #....: 2017362 Analysis Time...: 12:05  
 Dilution Factor: 1  
 Analyst ID.....: 001464 Instrument ID...: G13  
 Method.....: SW846 8015B

<u>PARAMETER</u>	<u>REPORTING</u>			
	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
C6-C8	0.12 J	1.0	mg/kg	0.10
<u>SURROGATE</u>				
a,a,a-Trifluorotoluene (TFT)	PERCENT RECOVERY	RECOVERY LIMITS		
	83	(60 - 130)		

## NOTE(S) :

J Estimated result. Result is less than RL.

000009

## HALEY &amp; ALDRICH INC

Client Sample ID: BL-1-10

## GC/MS Volatiles

Lot-Sample #....: E2A150272-001 Work Order #....: ERN8M1AD Matrix.....: SOLID  
 Date Sampled...: 01/15/02 11:00 Date Received...: 01/15/02 16:40 MS Run #.....: 2021104  
 Prep Date.....: 01/18/02 Analysis Date...: 01/18/02  
 Prep Batch #....: 2021322 Analysis Time...: 23:48  
 Dilution Factor: 1  
 Analyst ID.....: 999998 Instrument ID...: MSD  
 Method.....: SW846 8260B

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Dichlorodifluoromethane	ND	10	ug/kg	1.0
Chloromethane	ND	10	ug/kg	3.0
Vinyl chloride	ND	10	ug/kg	2.0
Bromomethane	ND	10	ug/kg	8.0
1,2-Dibromoethane	ND	5.0	ug/kg	3.0
Chloroethane	ND	10	ug/kg	2.0
Trichlorofluoromethane	ND	10	ug/kg	2.0
Acrolein	ND	100	ug/kg	30
1,1-Dichloroethene	ND	5.0	ug/kg	2.0
Iodomethane	ND	10	ug/kg	10
Acetone	ND	25	ug/kg	15
Carbon disulfide	ND	5.0	ug/kg	3.0
Methylene chloride	ND	5.0	ug/kg	3.0
trans-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
Acrylonitrile	ND	100	ug/kg	30
Methyl tert-butyl ether	ND	5.0	ug/kg	1.0
1,1-Dichloroethane	ND	5.0	ug/kg	1.0
Vinyl acetate	ND	10	ug/kg	5.0
2,2-Dichloropropane	ND	5.0	ug/kg	2.0
cis-1,2-Dichloroethene	ND	5.0	ug/kg	2.0
2-Butanone	ND	25	ug/kg	15
Bromochloromethane	ND	5.0	ug/kg	1.0
Chloroform	ND	5.0	ug/kg	1.0
Tetrahydrofuran	ND	20	ug/kg	2.0
1,1,1-Trichloroethane	ND	5.0	ug/kg	1.0
1,1-Dichloropropane	ND	5.0	ug/kg	1.0
Carbon tetrachloride	ND	5.0	ug/kg	1.0
Benzene	ND	5.0	ug/kg	2.0
1,2-Dichloroethane	ND	5.0	ug/kg	1.0
Trichloroethene	ND	5.0	ug/kg	2.0
1,2-Dichloropropane	ND	5.0	ug/kg	1.0
Bromodichloromethane	ND	5.0	ug/kg	1.0
2-Chloroethyl vinyl ether	ND	10	ug/kg	5.0
cis-1,3-Dichloropropene	ND	5.0	ug/kg	1.0
4-Methyl-2-pentanone	ND	25	ug/kg	10
Toluene	ND	5.0	ug/kg	2.0
trans-1,3-Dichloropropene	ND	5.0	ug/kg	3.0

(Continued on next page)

000010

## HALEY &amp; ALDRICH INC

Client Sample ID: BL-1-10

## GC/MS Volatiles

Lot-Sample #...: E2A150272-001 Work Order #...: ERN8M1AD Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
1,1,2-Trichloroethane	ND	5.0	ug/kg	3.0
Tetrachloroethene	ND	5.0	ug/kg	2.0
2-Hexanone	ND	25	ug/kg	10
Dibromochloromethane	ND	5.0	ug/kg	1.0
Chlorobenzene	ND	5.0	ug/kg	2.0
Ethylbenzene	ND	5.0	ug/kg	2.0
Xylenes (total)	ND	5.0	ug/kg	3.0
Styrene	ND	10	ug/kg	2.0
Bromoform	ND	5.0	ug/kg	3.0
Isopropylbenzene	ND	5.0	ug/kg	2.0
p-Isopropyltoluene	ND	5.0	ug/kg	2.0
Bromobenzene	ND	5.0	ug/kg	2.0
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	3.0
1,2,3-Trichloropropane	ND	5.0	ug/kg	3.0
n-Propylbenzene	ND	5.0	ug/kg	2.0
2-Chlorotoluene	ND	5.0	ug/kg	2.0
4-Chlorotoluene	ND	5.0	ug/kg	2.0
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	2.0
tert-Butylbenzene	ND	5.0	ug/kg	2.0
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	2.0
sec-Butylbenzene	ND	5.0	ug/kg	2.0
1,3-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,4-Dichlorobenzene	ND	5.0	ug/kg	2.0
1,2-Dichlorobenzene	ND	5.0	ug/kg	2.0
n-Butylbenzene	ND	5.0	ug/kg	2.0
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	3.0
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	2.0
Hexachlorobutadiene	ND	5.0	ug/kg	2.0
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	2.0
t-Butanol	ND	100	ug/kg	50
Isopropyl ether	ND	10	ug/kg	1.0
Tert-amyl methyl ether	ND	10	ug/kg	2.0
Tert-butyl ethyl ether	ND	10	ug/kg	1.0
<u>SURROGATE</u>		<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
Bromofluorobenzene	78	(65 - 135)		
1,2-Dichloroethane-d4	80	(60 - 140)		
Toluene-d8	86	(70 - 130)		

000011

## HALEY &amp; ALDRICH INC

Client Sample ID: BL-1-10

## HPLC

Lot-Sample #...: E2A150272-001 Work Order #...: ERN8M1AI Matrix.....: SOLID  
 Date Sampled...: 01/15/02 11:00 Date Received...: 01/15/02 16:40 MS Run #....: 2016156  
 Prep Date.....: 01/16/02 Analysis Date...: 01/17/02  
 Prep Batch #...: 2016374 Analysis Time...: 23:54  
 Dilution Factor: 1  
 Analyst ID.....: 033077 Instrument ID...: LC7  
 Method.....: SW846 8310

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Acenaphthene	ND	400	ug/kg	63
Acenaphthylene	ND	200	ug/kg	46
Anthracene	ND	8.0	ug/kg	1.1
Benzo (a)anthracene	ND	16	ug/kg	1.7
Benzo (a)pyrene	ND	10	ug/kg	3.1
Benzo (b)fluoranthene	ND	4.0	ug/kg	2.4
Benzo (ghi)perylene	ND	16	ug/kg	3.1
Benzo (k)fluoranthene	ND	4.0	ug/kg	1.1
Chrysene	ND	20	ug/kg	14
Dibenz (a, h)anthracene	ND	40	ug/kg	9.2
Fluoranthene	ND	20	ug/kg	4.8
Fluorene	ND	40	ug/kg	6.7
Indeno(1, 2, 3-ad)pyrene	ND	20	ug/kg	3.1
Naphthalene	ND	200	ug/kg	23
Phenanthrene	ND	16	ug/kg	2.6
Pyrene	ND	40	ug/kg	11
<u>SURROGATE</u>		<u>PERCENT</u>	<u>RECOVERY</u>	
1-Methylnaphthalene		<u>RECOVERY</u>	<u>LIMITS</u>	
		76	(41 - 115)	

000012

HALEY & ALDRICH INC

BL-1-10

GC/MS Volatiles

Lot-Sample #: E2A150272-001

Work Order #: ERN8M1AD

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

<u>PARAMETER</u>	<u>CAS #</u>	<u>ESTIMATED RESULT</u>	<u>RETENTION TIME</u>	<u>UNITS</u>
None				ug/kg

000013

BOE-C6-0181578

HALEY & ALDRICH INC

Method Blank Report

GC/MS Volatiles

Lot-Sample #: E2A210000-322 B Work Order #: ER09N1AA

Matrix: SOLID

MASS SPECTROMETER/DATA SYSTEM (MSDS) TENTATIVELY IDENTIFIED COMPOUNDS

PARAMETER	CAS #	ESTIMATED	RETENTION	UNITS
		RESULT	TIME	
Unknown hydrocarbon		8.7	M 21.353	ug/kg
Unknown alkane		7.4	M 21.599	ug/kg

NOTE(S) :

M: Result was measured against nearest internal standard assuming a response factor of 1.

000014

## HALEY &amp; ALDRICH INC

Client Sample ID: BL-1-10

## TOTAL Metals

Lot-Sample #...: E2A150272-001

Date Sampled...: 01/15/02 11:00 Date Received...: 01/15/02 16:40

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Prep Batch #...: 2016399						
Aluminum	3840	40.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AE
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	16.0
Arsenic	3.7	2.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AF
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	0.80
Antimony	ND G	12.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AG
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	1.2
Barium	37.2	4.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AH
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	0.20
Cadmium	ND G	1.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AJ
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	0.12
Chromium	14.6 J	2.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AK
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	0.20
Beryllium	0.32 B,J,G	1.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AL
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	0.10
Lead	2.7 J	1.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AM
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	0.60
Selenium	ND G	1.0	mg/kg	SW846 6010B	01/16-01/18/02	ERN8M1AN
		Dilution Factor: 2		Analysis Time...: 11:37	Analyst ID.....:	021088
		Instrument ID...: M01		MS Run #.....: 2016183	MDL.....:	0.80

(Continued on next page)

000015

## HALEY &amp; ALDRICH INC

Client Sample ID: BL-1-10

## TOTAL Metals

Lot-Sample #....: E2A150272-001

Matrix.....: SOLID

PARAMETER	RESULT	REPORTING			METHOD	PREPARATION-	WORK	ORDER #
		LIMIT	UNITS					
Silver	ND G	2.0	mg/kg		SW846 6010B	01/16-01/18/02	ERN8M1AP	
		Dilution Factor: 2			Analysis Time...: 11:37		Analyst ID.....: 021088	
		Instrument ID...: M01			MS Run #.....: 2016183		MDL.....: 0.20	
Cobalt	1.8 B,G	10.0	mg/kg		SW846 6010B	01/16-01/18/02	ERN8M1AQ	
		Dilution Factor: 2			Analysis Time...: 11:37		Analyst ID.....: 021088	
		Instrument ID...: M01			MS Run #.....: 2016183		MDL.....: 0.20	
Copper	4.2 B,J,G	5.0	mg/kg		SW846 6010B	01/16-01/18/02	ERN8M1AR	
		Dilution Factor: 2			Analysis Time...: 11:37		Analyst ID.....: 021088	
		Instrument ID...: M01			MS Run #.....: 2016183		MDL.....: 0.80	
Molybdenum	ND G	8.0	mg/kg		SW846 6010B	01/16-01/18/02	ERN8M1AT	
		Dilution Factor: 2			Analysis Time...: 11:37		Analyst ID.....: 021088	
		Instrument ID...: M01			MS Run #.....: 2016183		MDL.....: 0.60	
Nickel	4.4 B,G	8.0	mg/kg		SW846 6010B	01/16-01/18/02	ERN8M1AU	
		Dilution Factor: 2			Analysis Time...: 11:37		Analyst ID.....: 021088	
		Instrument ID...: M01			MS Run #.....: 2016183		MDL.....: 0.60	
Thallium	ND G	2.0	mg/kg		SW846 6010B	01/16-01/18/02	ERN8M1AV	
		Dilution Factor: 2			Analysis Time...: 11:37		Analyst ID.....: 021088	
		Instrument ID...: M01			MS Run #.....: 2016183		MDL.....: 1.6	
Vanadium	12.0	10.0	mg/kg		SW846 6010B	01/16-01/18/02	ERN8M1AW	
		Dilution Factor: 2			Analysis Time...: 11:37		Analyst ID.....: 021088	
		Instrument ID...: M01			MS Run #.....: 2016183		MDL.....: 0.20	
Zinc	12.5	4.0	mg/kg		SW846 6010B	01/16-01/18/02	ERN8M1AX	
		Dilution Factor: 2			Analysis Time...: 11:37		Analyst ID.....: 021088	
		Instrument ID...: M01			MS Run #.....: 2016183		MDL.....: 2.0	
Prep Batch #....:	2016402							
Mercury	0.033 B	0.10	mg/kg		SW846 7471A	01/16-01/17/02	ERN8M1AO	
		Dilution Factor: 1			Analysis Time...: 15:23		Analyst ID.....: 000023	
		Instrument ID...: M04			MS Run #.....: 2016185		MDL.....: 0.020	

NOTE (S) :

G Elevated reporting limit. The reporting limit is elevated due to matrix interference.

I Method blank contamination. The associated method blank contains the target analyte at a reportable level.

B Estimated result. Result is less than RL.

000016

SEVERN  
TRENT  
SERVICES

QA/QC

000017

# QC DATA ASSOCIATION SUMMARY

E2A150272

## Sample Preparation and Analysis Control Numbers

<u>SAMPLE#</u>	<u>MATRIX</u>	<u>ANALYTICAL METHOD</u>	<u>LEACH BATCH #</u>	<u>PREP BATCH #</u>	<u>MS RUN#</u>
001	SOLID	SW846 8015B		2016317	2016128
	SOLID	SW846 8015B		2017362	2017163
	SOLID	SW846 7471A		2016402	2016185
	SOLID	SW846 8260B		2021322	2021104
	SOLID	SW846 6010B		2016399	2016183
		SW846 8310		2016374	2016156

000018

## METHOD BLANK REPORT

## GC Semivolatiles

Client Lot #....: E2A150272      Work Order #....: ERQMR1AA      Matrix.....: SOLID  
 MB Lot-Sample #: E2A160000-317  
 Analysis Date...: 01/18/02      Prep Date.....: 01/16/02      Analysis Time...: 16:35  
 Dilution Factor: 1      Prep Batch #: 2016317      Instrument ID...: G02  
 Analyst ID.....: 356074

<u>PARAMETER</u>	<u>REPORTING</u>			
	<u>RESULT</u>	<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
C8-C9	ND	10	mg/kg	SW846 8015B
C10-C11	ND	10	mg/kg	SW846 8015B
C12-C13	ND	10	mg/kg	SW846 8015B
C14-C15	ND	10	mg/kg	SW846 8015B
C16-C17	ND	10	mg/kg	SW846 8015B
C18-C19	ND	10	mg/kg	SW846 8015B
C20-C23	ND	10	mg/kg	SW846 8015B
C24-C27	ND	10	mg/kg	SW846 8015B
C28-C31	ND	10	mg/kg	SW846 8015B
C32-C35	ND	10	mg/kg	SW846 8015B
C36-C39	ND	10	mg/kg	SW846 8015B
C40+	ND	10	mg/kg	SW846 8015B
Total Carbon Chain Range	ND	10	mg/kg	SW846 8015B
<hr/>				
<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>		
Benzo(a)pyrene	RECOVERY	LIMITS (60 - 130)		
	94			

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000013

## METHOD BLANK REPORT

## HPLC

Client Lot #...: E2A150272  
 MB Lot-Sample #: G2A160000-374  
 Analysis Date...: 01/17/02  
 Dilution Factor: 1

Work Order #...: ERQ3W1AA  
 Prep Date.....: 01/16/02  
 Prep Batch #...: 2016374  
 Analyst ID....: 033077

Matrix.....: SOLID  
 Analysis Time..: 22:43  
 Instrument ID..: LC7

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		
		<u>LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>
Acenaphthene	ND	400	ug/kg	SW846 8310
Acenaphthylene	ND	200	ug/kg	SW846 8310
Anthracene	ND	8.0	ug/kg	SW846 8310
Benzo(a)anthracene	ND	16	ug/kg	SW846 8310
Benzo(a)pyrene	ND	10	ug/kg	SW846 8310
Benzo(b)fluoranthene	ND	4.0	ug/kg	SW846 8310
Benzo(ghi)perylene	ND	16	ug/kg	SW846 8310
Benzo(k)fluoranthene	ND	4.0	ug/kg	SW846 8310
Chrysene	ND	20	ug/kg	SW846 8310
Dibenz(a,h)anthracene	ND	40	ug/kg	SW846 8310
Fluoranthene	ND	20	ug/kg	SW846 8310
Fluorene	ND	40	ug/kg	SW846 8310
Indeno(1,2,3-cd)pyrene	ND	20	ug/kg	SW846 8310
Naphthalene	ND	200	ug/kg	SW846 8310
Phenanthrene	ND	16	ug/kg	SW846 8310
Pyrene	ND	40	ug/kg	SW846 8310

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	
		<u>RECOVERY</u>	<u>LIMITS</u>
1-Methylnaphthalene	75	(41 ~ 115)	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000020

METHOD BLANK REPORT

GC Volatiles

Client Lot #....: E2A150272  
MB Lot-Sample #: E2A170000-362  
Analysis Date...: 01/16/02  
Dilution Factor: 1

Work Order #....: ERT7G1AA  
Prep Date.....: 01/16/02  
Prep Batch #....: 2017362  
Analyst ID.....: 001464

Matrix.....: SOLID  
Analysis Time...: 11:09  
Instrument ID...: G13

PARAMETER	RESULT	REPORTING		METHOD
		LIMIT	UNITS	
C6 - C8	ND	1.0	mg/kg	SW846 8015B
SURROGATE	PERCENT	RECOVERY		
a,a,a-Trifluorotoluene (TFT)	RECOVERY	LIMITS		
	83	(60 ~ 130)		

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000021

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #....: E2A150272      Work Order #....: ER09N1AA      Matrix.....: SOLID  
 MB Lot-Sample #: E2A210000-322  
 Analysis Date...: 01/18/02      Prep Date.....: 01/18/02      Analysis Time..: 23:18  
 Dilution Factor: 1      Prep Batch #: 2021322      Instrument ID..: MSD  
 Analyst ID.....: 999998

PARAMETER	REPORTING			
	RESULT	LIMIT	UNITS	METHOD
Dichlorodifluoromethane	ND	1.0	ug/kg	SW846 8260B
Chloromethane	ND	10	ug/kg	SW846 8260B
Vinyl chloride	ND	10	ug/kg	SW846 8260B
Bromomethane	ND	10	ug/kg	SW846 8260B
1,2-Dibromoethane	ND	5.0	ug/kg	SW846 8260B
Chloroethane	ND	10	ug/kg	SW846 8260B
Trichlorofluoromethane	ND	10	ug/kg	SW846 8260B
Acrolein	ND	100	ug/kg	SW846 8260B
1,1-Dichloroethene	ND	5.0	ug/kg	SW846 8260B
Iodomethane	ND	10	ug/kg	SW846 8260B
Acetone	ND	25	ug/kg	SW846 8260B
Carbon disulfide	ND	5.0	ug/kg	SW846 8260B
Methylene chloride	ND	5.0	ug/kg	SW846 8260B
trans-1,2-Dichloroethene	ND	5.0	ug/kg	SW846 8260B
Acrylonitrile	ND	100	ug/kg	SW846 8260B
Methyl tert-butyl ether	ND	5.0	ug/kg	SW846 8260B
1,1-Dichloroethane	ND	5.0	ug/kg	SW846 8260B
Vinyl acetate	ND	10	ug/kg	SW846 8260B
2,2-Dichloropropane	ND	5.0	ug/kg	SW846 8260B
cis-1,2-Dichloroethane	ND	5.0	ug/kg	SW846 8260B
2-Butanone	ND	25	ug/kg	SW846 8260B
Bromochloromethane	ND	5.0	ug/kg	SW846 8260B
Chloroform	ND	5.0	ug/kg	SW846 8260B
Tetrahydrofuran	ND	20	ug/kg	SW846 8260B
1,1,1-Trichloroethane	ND	5.0	ug/kg	SW846 8260B
1,1-Dichloropropene	ND	5.0	ug/kg	SW846 8260B
Carbon tetrachloride	ND	5.0	ug/kg	SW846 8260B
Benzene	ND	5.0	ug/kg	SW846 8260B
1,2-Dichloroethane	ND	5.0	ug/kg	SW846 8260B
Trichloroethene	ND	5.0	ug/kg	SW846 8260B
1,2-Dichloropropane	ND	5.0	ug/kg	SW846 8260B
Bromodichloromethane	ND	5.0	ug/kg	SW846 8260B
2-Chloroethyl vinyl ether	ND	10	ug/kg	SW846 8260B
cis-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260B
4-Methyl-2-pentanone	ND	25	ug/kg	SW846 8260B
Toluene	ND	5.0	ug/kg	SW846 8260B
trans-1,3-Dichloropropene	ND	5.0	ug/kg	SW846 8260B
1,1,2-Trichloroethane	ND	5.0	ug/kg	SW846 8260B
Tetrachloroethene	ND	5.0	ug/kg	SW846 8260B
2-Hexanone	ND	25	ug/kg	SW846 8260B

(Continued on next page)

000022

## METHOD BLANK REPORT

## GC/MS Volatiles

Client Lot #...: E2A150272

Work Order #...: ER09N1AA

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>		<u>METHOD</u>
		<u>LIMIT</u>	<u>UNITS</u>	
Dibromochloromethane	ND	5.0	ug/kg	SW846 8260B
Chlorobenzene	ND	5.0	ug/kg	SW846 8260B
Ethylbenzene	ND	5.0	ug/kg	SW846 8260B
Xylenes (total)	ND	5.0	ug/kg	SW846 8260B
Styrene	ND	10	ug/kg	SW846 8260B
Bromoform	ND	5.0	ug/kg	SW846 8260B
Isopropylbenzene	ND	5.0	ug/kg	SW846 8260B
p-Isopropyltoluene	ND	5.0	ug/kg	SW846 8260B
Bromobenzene	ND	5.0	ug/kg	SW846 8260B
1,1,1,2-Tetrachloroethane	ND	5.0	ug/kg	SW846 8260B
1,1,2,2-Tetrachloroethane	ND	5.0	ug/kg	SW846 8260B
1,2,3-Trichloropropane	ND	5.0	ug/kg	SW846 8260B
n-Propylbenzene	ND	5.0	ug/kg	SW846 8260B
2-Chlorotoluene	ND	5.0	ug/kg	SW846 8260B
4-Chlorotoluene	ND	5.0	ug/kg	SW846 8260B
1,3,5-Trimethylbenzene	ND	5.0	ug/kg	SW846 8260B
tert-Butylbenzene	ND	5.0	ug/kg	SW846 8260B
1,2,4-Trimethylbenzene	ND	5.0	ug/kg	SW846 8260B
sec-Butylbenzene	ND	5.0	ug/kg	SW846 8260B
1,3-Dichlorobenzene	ND	5.0	ug/kg	SW846 8260B
1,4-Dichlorobenzene	ND	5.0	ug/kg	SW846 8260B
1,2-Dichlorobenzene	ND	5.0	ug/kg	SW846 8260B
n-Butylbenzene	ND	5.0	ug/kg	SW846 8260B
1,2-Dibromo-3-chloro-propane	ND	10	ug/kg	SW846 8260B
1,2,4-Trichloro-benzene	ND	5.0	ug/kg	SW846 8260B
Hexachlorobutadiene	ND	5.0	ug/kg	SW846 8260B
1,2,3-Trichlorobenzene	ND	5.0	ug/kg	SW846 8260B
t-Butanol	ND	100	ug/kg	SW846 8260B
Isopropyl ether	ND	10	ug/kg	SW846 8260B
Tert-amyl methyl ether	ND	10	ug/kg	SW846 8260B
Tert-butyl ethyl ether	ND	10	ug/kg	SW846 8260B
<u>SURROGATE</u>		<u>PERCENT</u>	<u>RECOVERY</u>	
		<u>RECOVERY</u>	<u>LIMITS</u>	
Bromofluorobenzene	78		(65 - 135)	
1,2-Dichloroethane-d4	80		(60 - 140)	
Toluene-d8	86		(70 - 130)	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000023

## METHOD BLANK REPORT

## TOTAL Metals

Client Lot #....: E2A150272

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>MB Lot-Sample #: E2A160000-399 Prep Batch #...: 2016399</b>						
Aluminum	ND	20.0	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1CF
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Arsenic	ND	1.0	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AA
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Antimony	ND	6.0	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AC
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Barium	ND	2.0	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AD
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Cadmium	ND	0.50	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AE
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Chromium	0.14 B	1.0	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AF
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Beryllium	0.092 B	0.50	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AG
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Lead	0.42 B	0.50	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AH
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Selenium	ND	0.50	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AJ
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Silver	ND	1.0	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AK
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	
Cobalt	ND	5.0	mg/kg	SW846 6010B	01/16-01/17/02	ERQ7T1AL
		Dilution Factor: 1				
		Analysis Time...: 17:25		Analyst ID.....: 021088	Instrument ID...: M01	

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000024

## METHOD BLANK REPORT

## TOTAL Metals

Client Lot #...: E2A150272

Matrix.....: SOLID

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u>			<u>METHOD</u>	<u>PREPARATION-</u>	<u>WORK</u>
		<u>LIMIT</u>	<u>UNITS</u>	<u>ANALYSIS DATE</u>			
Copper	0.63 B	2.5	mg/kg	SW846 6010B		01/16-01/17/02	ERQ7T1AM
		Dilution Factor: 1					
		Analysis Time...: 17:25		Analyst ID.....: 021088		Instrument ID...: M01	
Molybdenum	ND	4.0	mg/kg	SW846 6010B		01/16-01/17/02	ERQ7T1AN
		Dilution Factor: 1					
		Analysis Time...: 17:25		Analyst ID.....: 021088		Instrument ID...: M01	
Nickel	ND	4.0	mg/kg	SW846 6010B		01/16-01/17/02	ERQ7T1AP
		Dilution Factor: 1					
		Analysis Time...: 17:25		Analyst ID.....: 021088		Instrument ID...: M01	
Thallium	ND	1.0	mg/kg	SW846 6010B		01/16-01/17/02	ERQ7T1AQ
		Dilution Factor: 1					
		Analysis Time...: 17:25		Analyst ID.....: 021088		Instrument ID...: M01	
Vanadium	ND	5.0	mg/kg	SW846 6010B		01/16-01/17/02	ERQ7T1AR
		Dilution Factor: 1					
		Analysis Time...: 17:25		Analyst ID.....: 021088		Instrument ID...: M01	
Zinc	ND	2.0	mg/kg	SW846 6010B		01/16-01/17/02	ERQ7T1AT
		Dilution Factor: 1					
		Analysis Time...: 17:25		Analyst ID.....: 021088		Instrument ID...: M01	

MB Lot-Sample #: E2A160000-402 Prep Batch #...: 2016402

Mercury	ND	0.10	mg/kg	SW846 7471A	01/16-01/17/02	ERQ8K1AA
		Dilution Factor: 1				
		Analysis Time...: 14:39		Analyst ID.....: 000023	Instrument ID...: M04	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

B Estimated result. Result is less than RL.

000025

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC Semivolatiles

Client Lot #....: E2A150272      Work Order #....: ERQMR1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: E2A160000-317  
 Prep Date.....: 01/16/02      Analysis Date...: 01/16/02  
 Prep Batch #: 2016317      Analysis Time...: 17:56  
 Dilution Factor: 1      Instrument ID...: G02  
 Analyst ID.....: 356074

<u>PARAMETER</u>	<u>SPIKE</u>	<u>MEASURED</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMOUNT</u>	<u>UNITS</u>	<u>mg/kg</u>	
TPH (as Diesel)	250	207		83	SW846 8015B
<u>SURROGATE</u>			<u>PERCENT</u>	<u>RECOVERY</u>	
Benzo (a)pyrene			<u>RECOVERY</u>	<u>LIMITS</u>	
			85	(60 - 130)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000026

## LABORATORY CONTROL SAMPLE DATA REPORT

## HPLC

Client Lot #...: E2A150272      Work Order #...: ERQ3W1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: G2A160000-374  
 Prep Date....: 01/16/02      Analysis Date...: 01/17/02  
 Prep Batch #:...: 2016374      Analysis Time...: 23:18  
 Dilution Factor: 1      Instrument ID...: LC7  
 Analyst ID.....: 033077

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
Acenaphthene	1330	1030	ug/kg	77	SW846 8310
Acenaphthylene	667	462	ug/kg	69	SW846 8310
Anthracene	26.6	15.6	ug/kg	59	SW846 8310
Benzo(a)anthracene	66.7	50.3	ug/kg	75	SW846 8310
Benzo(a)pyrene	66.7	46.2	ug/kg	69	SW846 8310
Benzo(b)fluoranthene	26.6	18.9	ug/kg	71	SW846 8310
Benzo(ghi)perylene	106	76.0	ug/kg	71	SW846 8310
Benzo(k)fluoranthene	26.6	19.0	ug/kg	71	SW846 8310
Chrysene	66.7	50.0	ug/kg	75	SW846 8310
Dibenz(a,h)anthracene	266	170	ug/kg	64	SW846 8310
Fluoranthene	66.7	44.2	ug/kg	66	SW846 8310
Fluorene	133	60.4	ug/kg	45	SW846 8310
Indeno(1,2,3-cd)pyrene	66.7	47.9	ug/kg	72	SW846 8310
Naphthalene	667	425	ug/kg	64	SW846 8310
Phenanthrene	53.2	29.1	ug/kg	55	SW846 8310
Pyrene	133	90.1	ug/kg	68	SW846 8310

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
1-Methylnaphthalene	75	(41 - 115)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

000027

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC Volatiles

Client Lot #....: E2A150272      Work Order #....: ERT7G1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: E2A170000-362  
 Prep Date.....: 01/16/02      Analysis Date..: 01/16/02  
 Prep Batch #...: 2017362      Analysis Time..: 11:37  
 Dilution Factor: 1      Instrument ID..: G13  
 Analyst ID.....: 001464

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>PERCENT UNITS</u>	<u>PERCENT RECOVERY</u>	<u>METHOD</u>
TPH (as Gasoline)	5.00	4.94	mg/kg	99	SW846 8015B
<u>SURROGATE</u>			<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
a,a,a-Trifluorotoluene (TFT)		112		(60 - 130)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000028

## LABORATORY CONTROL SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #....: E2A150272      Work Order #....: ER09N1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: E2A210000-322  
 Prep Date.....: 01/18/02      Analysis Date...: 01/18/02  
 Prep Batch #:....: 2021322      Analysis Time...: 22:48  
 Dilution Factor: 1      Instrument ID...: MSD  
 Analyst ID.....: 999998

<u>PARAMETER</u>	<u>SPIKE</u>	<u>MEASURED</u>	<u>PERCENT</u>	<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMOUNT</u>	<u>UNITS</u>	<u>RECOVERY</u>
1,1-Dichloroethene	50.0	52.0	ug/kg	104
Benzene	50.0	54.4	ug/kg	109
Trichloroethene	50.0	52.9	ug/kg	106
Toluene	50.0	50.1	ug/kg	100
Chlorobenzene	50.0	51.1	ug/kg	102

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	81	(65 - 135)
1,2-Dichloroethane-d4	88	(60 - 140)
Toluene-d8	85	(70 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.  
 Bold print denotes control parameters

000023

**LABORATORY CONTROL SAMPLE DATA REPORT**

**TOTAL Metals**

**Client Lot #...: E2A150272**

**Matrix.....: SOLID**

<u>PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASURED AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVRY</u>	<u>METHOD</u>	<u>PREPARATION-ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>LCS Lot-Sample#: E2A160000~399 Prep Batch #: 2016399</b>							
Arsenic	200	188	mg/kg	94	SW846 6010B	01/16-01/17/02	ERQ7T1AU
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01
Aluminum	200	182	mg/kg	91	SW846 6010B	01/16-01/17/02	ERQ7T1CG
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument id...: M01
Antimony	50.0	45.2	mg/kg	90	SW846 6010B	01/16-01/17/02	ERQ7T1AV
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01
Barium	200	189	mg/kg	94	SW846 6010B	01/16-01/17/02	ERQ7T1AW
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01
Cadmium	5.00	4.87	mg/kg	97	SW846 6010B	01/16-01/17/02	ERQ7T1AX
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01
Chromium	20.0	20.2	mg/kg	101	SW846 6010B	01/16-01/17/02	ERQ7T1AO
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01
Beryllium	5.00	5.14	mg/kg	103	SW846 6010B	01/16-01/17/02	ERQ7T1AI
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01
Lead	50.0	47.4	mg/kg	95	SW846 6010B	01/16-01/17/02	ERQ7T1AZ
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01
Selenium	200	174	mg/kg	87	SW846 6010B	01/16-01/17/02	ERQ7T1A3
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01
Silver	5.00	4.74	mg/kg	95	SW846 6010B	01/16-01/17/02	ERQ7T1A4
			Dilution Factor:	1			
			Analysis Time...:	17:33		Analyst ID.....: 021088	Instrument ID...: M01

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**000030**

## LABORATORY CONTROL SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #...: E2A150272

Matrix.....: SOLID

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCNT RECVRY	METHOD	PREPARATION- ANALYSIS DATE	WORK ORDER #
Cobalt	50.0	48.3	mg/kg	97	SW846 6010B	01/16-01/17/02	ERQ7T1A5
			Dilution Factor:	1			
			Analysis Time...:	17:33	Analyst ID....: 021088	Instrument ID...: M01	
Copper	25.0	23.3	mg/kg	93	SW846 6010B	01/16-01/17/02	ERQ7T1A6
			Dilution Factor:	1			
			Analysis Time...:	17:33	Analyst ID....: 021088	Instrument ID...: M01	
Molybdenum	100	97.8	mg/kg	98	SW846 6010B	01/16-01/17/02	ERQ7T1A7
			Dilution Factor:	1			
			Analysis Time...:	17:33	Analyst ID....: 021088	Instrument ID...: M01	
Nickel	50.0	48.0	mg/kg	96	SW846 6010B	01/16-01/17/02	ERQ7T1A8
			Dilution Factor:	1			
			Analysis Time...:	17:33	Analyst ID....: 021088	Instrument ID...: M01	
Thallium	200	187	mg/kg	93	SW846 6010B	01/16-01/17/02	ERQ7T1A9
			Dilution Factor:	1			
			Analysis Time...:	17:33	Analyst ID....: 021088	Instrument ID...: M01	
Vanadium	50.0	49.4	mg/kg	99	SW846 6010B	01/16-01/17/02	ERQ7T1CA
			Dilution Factor:	1			
			Analysis Time...:	17:33	Analyst ID....: 021088	Instrument ID...: M01	
Zinc	50.0	49.7	mg/kg	99	SW846 6010B	01/16-01/17/02	ERQ7T1CC
			Dilution Factor:	1			
			Analysis Time...:	17:33	Analyst ID....: 021088	Instrument ID...: M01	
LCS Lot-Sample#:	E2A160000-402	Prep Batch #...:	2016402				
Mercury	0.833	0.808	mg/kg	97	SW846 7471A	01/16-01/17/02	ERQ8K1AC
			Dilution Factor:	1			
			Analysis Time...:	14:41	Analyst ID....: 000023	Instrument ID...: M04	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000031

LABORATORY CONTROL SAMPLE EVALUATION REPORT

GC Semivolatiles

Client Lot #....: E2A150272      Work Order #....: ERQMR1AC      Matrix.....: SOLID  
LCS Lot-Sample#: E2A160000-317  
Prep Date.....: 01/16/02      Analysis Date...: 01/16/02  
Prep Batch #:....: 2016317      Analysis Time...: 17:56  
Dilution Factor: 1      Instrument ID.: G02  
Analyst ID.....: 356074

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
TPH (as Diesel)	83	(55 ~ 130)	SW846 8015B
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
Benzo (a) pyrene	85	(60 - 130)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000032

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## HPLC

Client Lot #....: E2A150272      Work Order #....: ERQ3W1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: G2A160000-374  
 Prep Date.....: 01/16/02      Analysis Date...: 01/17/02  
 Prep Batch #....: 2016374      Analysis Time...: 23:18  
 Dilution Factor: 1      Instrument ID...: LC7  
 Analyst ID.....: 033077

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>METHOD</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	
Acenaphthene	77	(50 - 150)	<b>SW846</b> 8310
Acenaphthylene	69	(50 - 150)	<b>SW846</b> 8310
Anthracene	59	(50 - 150)	<b>SW846</b> 8310
Benzo (a) anthracene	75	(50 - 150)	<b>SW846</b> 8310
Benzo (a)pyrene	<b>69</b>	(49 - 107)	<b>SW846</b> 8310
Benzo (b) fluoranthene	71	(50 - 150)	<b>SW846</b> 8310
Benzo (ghi)perylene	71	(50 - 150)	<b>SW846</b> 8310
Benzo (k) fluoranthene	71	(50 - 150)	<b>SW846</b> 8310
Chrysene	75	(50 - 150)	<b>SW846</b> 8310
Dibenz (a, h)anthracene	64	(50 - 150)	<b>SW846</b> 8310
Fluoranthene	66	(50 - 150)	<b>SW846</b> 8310
Fluorene	45	(43 - 112)	<b>SW846</b> 8310
Indeno (1, 2, 3-cd)pyrene	72	(54 - 114)	<b>SW846</b> 8310
Naphthalene	<b>64</b>	(44 - 110)	<b>SW846</b> 8310
Phenanthrene	55	(50 - 150)	<b>SW846</b> 8310
Pyrene	68	(49 - 115)	<b>SW846</b> 8310

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	
1-Methylnaphthalene	75		(41 - 115)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000033

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC Volatiles

Client Lot #...: E2A150272      Work Order #...: ERT7G1AC      Matrix.....: SOLID  
LCS Lot-Sample#: E2A170000-362  
Prep Date.....: 01/16/02      Analysis Date..: 01/16/02  
Prep Batch #:...: 2017362      Analysis Time..: 11:37  
Dilution Factor: 1      Instrument ID..: G13  
Analyst ID.....: 001464

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
TPH (as Gasoline)	99	(70 - 140)	SW846 8015B
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	
a,a,a-Trifluorotoluene (TFT)	112	(60 - 130)	

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000034

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Client Lot #...: E2A150272      Work Order #...: ER09N1AC      Matrix.....: SOLID  
 LCS Lot-Sample#: E2A210000-322  
 Prep Date.....: 01/18/02      Analysis Date...: 01/18/02  
 Prep Batch #...: 2021322      Analysis Time...: 22:48  
 Dilution Factor: 1      Instrument ID...: MSD  
 Analyst ID....: 999998

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>
1,1-Dichloroethene	104	(65 - 150)	SW846 8260B
Benzene	109	(70 - 130)	SW846 8260B
Trichloroethene	106	(70 - 135)	SW846 8260B
Toluene	100	(70 - 130)	SW846 8260B
Chlorobenzene	102	(70 ~ 130)	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
Bromofluorobenzene	81	(65 - 135)
1,2-Dichloroethane-d4	88	(60 - 140)
Toluene-d8	85	(70 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000035

## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #...: E2A150272

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-ANALYSIS DATE</u>	<u>WORK ORDER #</u>
LCS Lot-Sample#:	E2A160000-399	Prep Batch #...: 2016399			
Arsenica	94	(75 - 115)	SW846 6010B	01/16-01/17/02	ERQ7T1AU
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Aluminum	91	(70 - 115)	SW846 6010B	01/16-01/17/02	ERQ7T1CG
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Antimony	90	(75 - 115)	SW846 6010B	01/16-01/17/02	ERQ7T1AV
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Barium	94	(80 - 120)	SW846 6010B	01/16-01/17/02	ERQ7T1AW
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Cadmium	97	(80 - 120)	SW846 6010B	01/16-01/17/02	ERQ7T1AX
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Chromium	101	(85 - 120)	SW846 6010B	01/16-01/17/02	ERQ7T1AQ
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Beryllium	103	(80 - 120)	SW846 6010B	01/16-01/17/02	ERQ7T1A1
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Lead	95	(80 ~ 120)	SW846 6010B	01/16-01/17/02	ERQ7T1A2
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Selenium	87	(70 - 115)	SW846 6010B	01/16-01/17/02	ERQ7T1A3
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	
Silver	95	(80 - 120)	SW846 6010B	01/16-01/17/02	ERQ7T1A4
		Dilution Factor: 1			
		Analysis Time...: 17:33	Analyst ID.....: 021088	Instrument ID...: M01	

(Continued on next page)

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## LABORATORY CONTROL SAMPLE EVALUATION REPORT

## TOTAL Metals

Client Lot #....: E2A150272

Matrix.....: SOLID

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>METHOD</u>	<u>PREPARATION-</u>	<u>ANALYSIS DATE</u>	<u>WORK ORDER #</u>
Cobalt	97	(80 - 120)	SW846 6010B		01/16-01/17/02	ERQ7T1A5
		Dilution Factor: 1				
		Analysis Time...: 17:33		Analyst ID.....: 021088		Instrument ID...: M01
Copper	93	(80 - 120)	SW846 6010B		01/16-01/17/02	ERQ7T1A6
		Dilution Factor: 1				
		Analysis Time...: 17:33		Analyst ID.....: 021088		Instrument ID...: M01
Molybdenum	98	(80 - 120)	SW846 6010B		01/16-01/17/02	ERQ7T1A7
		Dilution Factor: 1				
		Analysis Time...: 17:33		Analyst ID.....: 021088		Instrument ID...: M01
Nickel	96	(80 - 120)	SW846 6010B		01/16-01/17/02	ERQ7T1A8
		Dilution Factor: 1				
		Analysis Time...: 17:33		Analyst ID.....: 021088		Instrument ID...: M01
Thallium	93	(75 - 125)	SW846 6010B		01/16-01/17/02	ERQ7T1A9
		Dilution Factor: 1				
		Analysis Time...: 17:33		Analyst ID.....: 021088		Instrument ID...: M01
Vanadium	99	(80 - 120)	SW846 6010B		01/16-01/17/02	ERQ7T1CA
		Dilution Factor: 1				
		Analysis Time...: 17:33		Analyst ID.....: 021088		Instrument ID...: M01
Zinc	99	(80 - 120)	SW846 6010B		01/16-01/17/02	ERQ7T1CC
		Dilution Factor: 1				
		Analysis Time...: 17:33		Analyst ID.....: 021088		Instrument ID...: M01
LCS Lot-Sample#:	E2A160000-402	Prep Batch #....:	2016402			
Mercury	97	(85 - 115)	SW846 7471A		01/16-01/17/02	ERQ8K1AC
		Dilution Factor: 1				
		Analysis Time...: 14:41		Analyst ID.....: 000023		Instrument ID...: M04

NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

000037

MATRIX SPIKE SAMPLE DATA REPORT

TOTAL Metals

Client Lot #...: E2A150272 Matrix.....: SOLID  
 Date Sampled...: 01/14/02 12:30 Date Received...: 01/14/02 17:46

<u>SAMPLE PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASRD AMOUNT</u>	<u>UNITS</u>	<u>PERCNT RECVR</u>	<u>RPD</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS</u>	<u>WORK ORDER #</u>
<b>MS Lot-Sample #: E2A140199-001 Prep Batch #...: 2016399</b>								
<b>Aluminum</b>								
21800	200	26200	N mg/kg			SW846 6010B	01/16-01/17/02 ERMDP1C8	
21800	200	25600	N mg/kg			SW846 6010B	01/16-01/17/02 ERMDP1C8	
			Dilution Factor: 1					
			Analysis Time...: 19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183					
<b>Arsenic</b>								
16.6	200	205	mg/kg	94		SW846 6010B	01/16-01/17/02 ERMDP1AC	
16.6	200	203	mg/kg	93	0.77	SW846 6010B	01/16-01/17/02 ERMDP1A1	
			Dilution Factor: 1					
			Analysis Time...: 19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183					
<b>Antimony</b>								
ND	50.0	14.5	N mg/kg	29		SW846 6010B	01/16-01/17/02 ERMDP1A2	
ND	50.0	14.7	N mg/kg	29	1.6	SW846 6010B	01/16-01/17/02 ERMDP1A3	
			Dilution Factor: 1					
			Analysis Time...: 19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183					
<b>Barium</b>								
145	200	339	mg/kg	97		SW846 6010B	01/16-01/17/02 ERMDP1A4	
145	200	333	mg/kg	94	1.8	SW846 6010B	01/16-01/17/02 ERMDP1A5	
			Dilution Factor: 1					
			Analysis Time...: 19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183					
<b>Cadmium</b>								
0.24	5.00	5.35	mg/kg	102		SW846 6010B	01/16-01/17/02 ERMDP1A6	
0.24	5.00	5.18	mg/kg	99	3.2	SW846 6010B	01/16-01/17/02 ERMDP1A7	
			Dilution Factor: 1					
			Analysis Time...: 19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183					
<b>Chromium</b>								
23.3	20.0	45.6	mg/kg	112		SW846 6010B	01/16-01/17/02 ERMDP1A8	
23.3	20.0	44.7	mg/kg	107	1.9	SW846 6010B	01/16-01/17/02 ERMDP1A9	
			Dilution Factor: 1					
			Analysis Time...: 19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183					

(Continued on next page)

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## MATRIX SPIKE SAMPLE DATA REPORT

## TOTAL Metals

Client Lot #....: E2A150272

Matrix.....: SOLID

Date Sampled....: 01/14/02 12:30 Date Received...: 01/14/02 17:46

<u>PARAMETER</u>	<u>SAMPLE</u>	<u>SPIKE</u>	<u>MEASRD</u>	<u>PERCNT</u>			<u>PREPARATION-</u>	<u>WORK</u>	
	<u>AMOUNT</u>	<u>AMT</u>	<u>AMOUNT</u>	<u>UNITS</u>	<u>RECVRY</u>	<u>RPD</u>	<u>METHOD</u>	<u>ANALYSIS DATE</u>	<u>ORDER #</u>
<b>Beryllium</b>									
	0.76	5.00	5.70	mg/kg	99		SW846 6010B	01/16-01/17/02	ERMDP1CA
	0.76	5.00	5.60	mg/kg	97	1.9	SW846 6010B	01/16-01/17/02	ERMDP1CC
			Dilution Factor:	1					
			Analysis Time...:	19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....:	2016183					
<b>Lead</b>									
	6.1	50.0	53.2	mg/kg	94		SW846 6010B	01/16-01/17/02	ERMDP1CR
	6.1	50.0	52.9	mg/kg	94	0.48	SW846 6010B	01/16-01/17/02	ERMDP1CE
			Dilution Factor:	1					
			Analysis Time...:	19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....:	2016183					
<b>Selenium</b>									
	ND	200	172	mg/kg	86		SW846 6010B	01/16-01/17/02	ERMDP1CF
	ND	200	171	mg/kg	86	0.65	SW846 6010B	01/16-01/17/02	ERMDP1CG
			Dilution Factor:	1					
			Analysis Time...:	19:01			Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....:	2016183					
<b>Silver</b>									
	ND	5.00	4.62	mg/kg	92		SW846 6010B	01/16-01/17/02	ERMDP1CW

**MATRIX SPIKE SAMPLE DATA REPORT**

**TOTAL Metals**

Client Lot #...: E2A150272  
 Date Sampled...: 01/14/02 12:30 Date Received..: 01/14/02 17:46

Matrix.....: SOLID

<u>SAMPLE PARAMETER</u>	<u>SPIKE AMOUNT</u>	<u>MEASRD AMT</u>	<u>PERCNT RECVRY</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>MS Lot-Sample #: E2A140199-001 Prep Batch #...: 2016399</b>					
Aluminum					
	21800	200	26200 N mg/kg	SW846 6010B	01/16-01/17/02 ERMDP1C8
	21800	200	25600 N mg/kg	SW846 6010B	01/16-01/17/02 ERMDP1C9
			Dilution Factor: 1		
			Analysis Time...: 19:01	Instrument ID...: M01	Analyst ID.....: 021088
			MS Run #.....: 2016183		
Arsenic					
	16.6	200	205 mg/kg	94 SW846 6010B	01/16-01/17/02 ERMDP1A0
	16.6	200	203 mg/kg	93 0.77 SW846 6010B	01/16-01/17/02 ERMDP1A1
			Dilution Factor: 1		
			Analysis Time...: 19:01	Instrument ID...: M01	Analyst ID.....: 021088
			MS Run #.....: 2016183		
Antimony					
	ND	50.0	14.5 N mg/kg	29 SW846 6010B	01/16-01/17/02 ERMDP1A2
	ND	50.0	14.7 N mg/kg	29 1.6 SW846 6010B	01/16-01/17/02 ERMDP1A3
			Dilution Factor: 1		
			Analysis Time...: 19:01	Instrument ID...: M01	Analyst ID.....: 021088
			MS Run #.....: 2016183		
Barium					
	145	200	339 mg/kg	97 SW846 6010B	01/16-01/17/02 ERMDP1A4
	145	200	333 mg/kg	94 1.8 SW846 6010B	01/16-01/17/02 ERMDP1A5
			Dilution Factor: 1		
			Analysis Time...: 19:01	Instrument ID...: M01	Analyst ID.....: 021088
			MS Run #.....: 2016183		
Cadmium					
	0.24	5.00	5.35 mg/kg	102 SW846 6010B	01/16-01/17/02 ERMDP1A6
	0.24	5.00	5.18 mg/kg	99 3.2 SW846 6010B	01/16-01/17/02 ERMDP1A7
			Dilution Factor: 1		
			Analysis Time...: 19:01	Instrument ID...: M01	Analyst ID.....: 021088
			MS Run #.....: 2016183		
Chromium					
	23.3	20.0	45.6 mg/kg	112 SW846 6010B	01/16-01/17/02 ERMDP1A8
	23.3	20.0	44.7 mg/kg	107 1.9 SW846 6010B	01/16-01/17/02 ERMDP1A9
			Dilution Factor: 1		
			Analysis Time...: 19:01	Instrument ID...: M01	Analyst ID.....: 021088
			MS Run #.....: 2016183		

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**000038**

**MATRIX SPIKE SAMPLE DATA REPORT**

**TOTAL Metals**

Client Lot #....: E2A150272

Date Sampled...: 01/14/02 12:30 Date Received..: 01/14/02 17:46

Matrix.....: SOLID

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT			METHOD	PREPARATION-	WORK
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY	RPD		ANALYSIS DATE	ORDER #
<b>Beryllium</b>									
	0.76	\$ 0.00	5.70	mg/kg	99		SW846 6010B	01/16-01/17/02	ERMDP1CA
	0.76	5.00	5.60	mg/kg	97	1.9	SW846 6010B	01/16-01/17/02	ERMDP1CC
			Dilution Factor: 1						
			Analysis Time...: 19:01				Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183						
<b>Lead</b>									
	6.1	50.0	53.2	mg/kg	94		SW846 6010B	01/16-01/17/02	ERMDP1CD
	6.1	50.0	52.9	mg/kg	94	0.48	SW846 6010B	01/16-01/17/02	ERMDP1CE
			Dilution Factor: 1						
			Analysis Time...: 19:01				Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183						
<b>Selenium</b>									
	ND	200	172	mg/kg	86		SW846 6010B	01/16-01/17/02	ERMDP1CF
	ND	200	171	mg/kg	86	0.65	SW846 6010B	01/16-01/17/02	ERMDP1CG
			Dilution Factor: 1						
			Analysis Time...: 19:01				Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183						
<b>Silver</b>									
	ND	5.00	4.62	mg/kg	92		SW846 6010B	01/16-01/17/02	ERMDP1CH
	ND	5.00	4.70	mg/kg	94	1.5	SW846 6010B	01/16-01/17/02	ERMDP1CJ
			Dilution Factor: 1						
			Analysis Time...: 19:01				Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183						
<b>Cobalt</b>									
	11.6	50.0	61.1	mg/kg	99		SW846 6010B	01/16-01/17/02	ERMDP1CK
	11.6	50.0	66.4	mg/kg	110	8.3	SW846 6010B	01/16-01/17/02	ERMDP1CL
			Dilution Factor: 1						
			Analysis Time...: 19:01				Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183						
<b>Copper</b>									
	25.9	25.0	52.0	mg/kg	105		SW846 6010B	01/16-01/17/02	ERMDP1CM
	25.9	25.0	51.2	mg/kg	101	1.6	SW846 6010B	01/16-01/17/02	ERMDP1CN
			Dilution Factor: 1						
			Analysis Time...: 19:01				Instrument ID...: M01		Analyst ID.....: 021088
			MS Run #.....: 2016183						

(Continued on next page)

**000033**

**MATRIX SPIKE SAMPLE DATA REPORT**

**TOTAL Metals**

**Client Lot #....: E2A150272**  
**Date Sampled...: 01/14/02 12:30 Date Received...: 01/14/02 17:46**

**Matrix.....: SOLID**

<b>PARAMETER</b>	<b>SAMPLE AMOUNT</b>	<b>SPIKE AMT</b>	<b>MEASRD AMOUNT</b>	<b>UNITS</b>	<b>PERCNT RECVRY</b>	<b>RPD</b>	<b>METHOD</b>	<b>PREPARATION-</b>	<b>WORK</b>								
								<b>ANALYSIS DATE</b>	<b>ORDER #</b>								
<b>Molybdenum</b>																	
	0.47	100	93.7	mg/kg	93		SW846 6010B	01/16-01/17/02	ERMDP1CP								
	0.47	100	92.7	mg/kg	92	1.1	SW846 6010B	01/16-01/17/02	ERMDP1CQ								
	Dilution Factor: 1																
	Analysis Time...: 19:01								Instrument ID...: M01								
	MS Run #.....: 2016183								Analyst ID....: 021088								
<b>Nickel</b>																	
	14.8	50.0	62.4	mg/kg	95		SW846 6010B	01/16-01/17/02	ERMDP1CR								
	14.8	50.0	61.4	mg/kg	93	1.6	SW846 6010B	01/16-01/17/02	ERMDP1CT								
	Dilution Factor: 1																
	Analysis Time...: 19:01								Instrument ID...: M01								
	MS Run #.....: 2016183								Analyst ID....: 021088								
<b>Thallium</b>																	
	ND	200	185	mg/kg	92		SW846 6010B	01/16-01/17/02	ERMDP1CU								
	ND	200	183	mg/kg	91	1.1	SW846 6010B	01/16-01/17/02	ERMDP1CV								
	Dilution Factor: 1																
	Analysis Time...: 19:01								Instrument ID...: M01								
	MS Run #.....: 2016183								Analyst ID....: 021088								
<b>Vanadium</b>																	
	52.1	50.0	107	mg/kg	109		SW846 6010B	01/16-01/17/02	ERMDP1CW								
	52.1	50.0	105	mg/kg	106	1.6	SW846 6010B	01/16-01/17/02	ERMDP1CX								
	Dilution Factor: 1																
	Analysis Time...: 19:01								Instrument ID...: M01								
	MS Run #.....: 2016183								Analyst ID....: 021088								
<b>Zinc</b>																	
	78.4	50.0	136	mg/kg	115		SW846 6010B	01/16-01/17/02	ERMDP1C0								
	78.4	50.0	135	mg/kg	114	0.41	SW846 6010B	01/16-01/17/02	ERMDP1C1								
	Dilution Factor: 1																
	Analysis Time...: 19:01								Instrument ID...: M01								
	MS Run #.....: 2016183								Analyst ID....: 021088								
<b>MS Lot-Sample #: E2A140199-001 Prep Batch #....: 2016402</b>																	
<b>Mercury</b>																	
	0.068	0.167	0.252	mg/kg	110		SW846 7471A	01/16-01/17/02	ERMDP1CS								
	0.068	0.167	0.238	mg/kg	102	5.4	SW846 7471A	01/16-01/17/02	ERMDP1C6								
	Dilution Factor: 1																
	Analysis Time...: 15:10								Instrument ID...: M04								
	MS Run #.....: 2016189								Analyst ID....: 000023								

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

NC The recovery and/or RPD were not calculated.

**000040**

## MATRIX SPTKE SAMPLE DATA REPORT

## GC Volatiles

Client Lot #...: E2A150272 Work Order #: ERN8M1A2-MS Matrix.....: SOLID  
MS Lot-Sample #: E2A150272-001 ERN8M1A3-MSD  
Date Sampled...: 01/15/02 11:00 Date Received...: 01/15/02 16:40 MS Run #: 2017163  
Prep Date.....: 01/16/02 Analysis Date...: 01/16/02  
Prep Batch #: 2017362 Analysis Time...: 12:33  
Dilution Factor: 1 Analyst ID....: 001464 Instrument ID.: G13

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT	METHOD		
	AMOUNT	AMT	AMOUNT	UNITS		RECVRY	RPD
TPH (as Gasoline)	0.12	5.00	4.92	mg/kg	96		SW846 8015B
	0.12	5.00	4.92	mg/kg	96	0.17	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
a,a,a-Trifluorotoluene (TFT)	112	(60 - 130)
	112	(60 - 130)

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print** denotes control parameters

000041

## MATRIX SPIKE SAMPLE DATA REPORT

## GC/MS Volatiles

Client Lot #....: E2A150272      Work Order #....: ERN9A1A2-MS      Matrix.....: SOLID  
 MS Lot-Sample #: E2A150278-001      ERN9A1A3-MSD  
 Date Sampled...: 01/10/02 12:40      Date Received...: 01/15/02 16:40      MS Run #....: 2021104  
 Prep Date.....: 01/19/02      Analysis Date...: 01/19/02  
 Prep Batch #....: 2021322      Analysis Time...: 02:49  
 Dilution Factor: 1      Analyst ID....: 999998      Instrument ID.: MSD

<u>PARAMETER</u>	<u>SAMPLE</u>	<u>SPIKE</u>	<u>MEASRD</u>	<u>PERCNT</u>	<u>RECVRY</u>	<u>RPD</u>	<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMT</u>	<u>AMOUNT</u>	<u>UNITS</u>			
1,1-Dichloroethene	ND	50.0	46.6	ug/kg	93		SW846 8260B
	ND	50.0	47.0	ug/kg	94	0.81	SW846 8260B
Benzene	ND	50.0	47.9	ug/kg	96		SW846 8260B
	ND	50.0	46.2	ug/kg	92	3.6	SW846 8260B
Trichloroethene	ND	50.0	50.9	ug/kg	102		SW846 8260B
	ND	50.0	49.2	ug/kg	98	3.3	SW846 8260B
Toluene	ND	50.0	45.7	ug/kg	91		SW846 8260B
	ND	50.0	43.2	ug/kg	86	5.6	SW846 8260B
Chlorobenzene	ND	50.0	44.8	ug/kg	90		SW846 8260B
	ND	50.0	42.1	ug/kg	84	6.4	SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	80	(65 - 135)
	82	(65 - 135)
1,2-Dichloroethane-d4	88	(60 - 140)
	89	(60 - 140)
Toluene-d8	86	(70 - 130)
	85	(70 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000042

## MATRIX SPIKE SAMPLE DATA REPORT

## GC Semivolatiles

Client Lot #: E2A150272 Work Order #: ERN9W1A2-MS Matrix.....: SOLID  
MS Lot-Sample #: E2A150278-005 ERN9W1A3-MSD  
Date Sampled...: 01/14/02 16:10 Date Received..: 01/15/02 16:40 MS Run #:.....: 2016128  
Prep Date.....: 01/16/02 Analysis Date..: 01/16/02  
Prep Batch #:..: 2016317 Analysis Time..: 19:53  
Dilution Factor: 1 Analyst ID....: 356074 Instrument ID...: G02

PARAMETER	SAMPLE	SPIKE	MEASRD	PERCNT		METHOD	
	AMOUNT	AMT	AMOUNT	UNITS	RECVRY		RPD
TPH (as Diesel)	ND	250	178	mg/kg	71		SW846 8015B
	ND	250	204	mg/kg	81	13	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
Benzo (a) pyrene	76	(60 - 130)
	83	(60 - 130)

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print** denotes control parameters

000043

## MATRIX SPIKE SAMPLE DATA REPORT

## HPLC

Client Lot #....: E2A150272      Work Order #....: ERN9W1A4-MS      Matrix.....: SOLID  
 MS Lot-Sample #: E2A150278-005      ERN9W1A5-MSD  
 Date Sampled...: 01/14/02 16:10      Date Received...: 01/15/02 16:40      MS Run #.....: 2016156  
 Prep Date.....: 01/16/02      Analysis Date...: 01/18/02  
 Prep Batch #....: 2016374      Analysis Time...: 03:27  
 Dilution Factor: 1      Analyst ID....: 033077      Instrument ID...: LC7

<u>PARAMETER</u>	<u>SAMPLE</u>	<u>SPIKE</u>	<u>MEASRD</u>	<u>UNITS</u>	<u>PERCNT</u>	<u>RECVRY</u>	<u>RPD</u>	<u>METHOD</u>
	<u>AMOUNT</u>	<u>AMT</u>						
Acenaphthene	ND	1330	1000	ug/kg	75	SW846	8310	
	ND	1330	999	ug/kg	75	0.46	SW846	8310
Acenaphthylene	ND	667	541	ug/kg	81		SW846	8310
	ND	667	498	ug/kg	75	8.4	SW846	8310
Anthracene	ND	26.6	19.4	ug/kg	73		SW846	8310
	ND	26.6	18.3	ug/kg	69	6.0	SW846	8310
Benzo(a)anthracene	ND	66.7	56.9	ug/kg	85		SW846	8310
	ND	66.7	56.9	ug/kg	85	0.02	SW846	8310
Benzo(a)pyrene	ND	66.7	52.9	ug/kg	79		SW846	8310
	ND	66.7	53.8	ug/kg	81	1.8	SW846	8310
Benzo(b)fluoranthene	ND	26.6	21.4	ug/kg	80		SW846	8310
	ND	26.6	21.5	ug/kg	81	0.62	SW846	8310
Benzo(ghi)perylene	ND	106	84.7	ug/kg	80		SW846	8310
	ND	106	86.1	ug/kg	81	1.6	SW846	8310
Benzo(k)fluoranthene	ND	26.6	21.3	ug/kg	80		SW846	8310
	ND	26.6	22.0	ug/kg	83	2.9	SW846	8310
Chrysene	ND	66.7	56.0	ug/kg	84		SW846	8310
	ND	66.7	55.8	ug/kg	84	0.47	SW846	8310
Dibenz(a,h)anthracene	ND	266	190	ug/kg	72		SW846	8310
	ND	266	193	ug/kg	72	1.2	SW846	8310
Fluoranthene	ND	66.7		ug/kg	78		SW846	8310
	ND	66.7	50.1	ug/kg	75	3.4	SWB46	8310
Fluorene	ND	133	79.7	ug/kg	60		SW846	8310
	ND	133	71.0	ug/kg	53	12	SW846	8310
Indeno(1,2,3-cd)pyrene	ND	66.7	53.4	ug/kg	80		SW846	8310
	ND	66.7	53.9	ug/kg	81	0.92	SW846	8310
Naphthalene	ND	667	496	ug/kg	74		SW846	8310
	ND	667	444	ug/kg	67	11	SW846	8310
Phenanthrene	ND	53.2	37.7	ug/kg	71		SW846	8310
	ND	53.2	34.8	ug/kg	65	8.0	SW846	8310
Pyrene	ND	133	109	ug/kg	82		SW846	8310
	ND	133	105	ug/kg	79	3.3	SW846	8310

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>
	<u>RECOVERY</u>		
1-Methylnaphthalene	81		(41 - 115)
	73		(41 - 115)

## NOTE(S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000044

MATRIX SPIKE SAMPLE EVALUATION REPORT

TOTAL Metals

Client Lot #...: E2A150272

Matrix.....: SOLID

Date Sampled...: 01/14/02 12:30 Date Received...: 01/14/02 17:46

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>	<u>PREPARATION- ANALYSIS DATE</u>	<u>WORK ORDER #</u>
<b>MS Lot-Sample #: E2A140199-001 Prep Batch #...: 2016399</b>							
Aluminum	NC	(70 - 115)		SW846 6010B		01/16-01/17/02 ERMDP1C8	
	NC	(70 - 115)	(0-25)	SW846 6010B		01/16-01/17/02 ERMDP1C9	
		Dilution Factor: 1					
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088	
		MS Run #.....: 2016183					
Arsenic	94	(75 - 115)		SW846 6010B		01/16-01/17/02 ERMDP1A0	
	93	(75 - 115) 0.77 (0-25)		SW846 6010B		01/16-01/17/02 ERMDP1A1	
		Dilution Factor: 1					
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088	
		MS Run #.....: 2016183					
Antimony	29 N	(75 - 115)		SW846 6010B		01/16-01/17/02 ERMDP1A2	
	29 N	(75 - 115) 1.6 (0-25)		SW846 6010B		01/16-01/17/02 ERMDP1A3	
		Dilution Factor: 1					
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088	
		MS Run #.....: 2016183					
Barium	97	(80 - 120)		SW846 6010B		01/16-01/17/02 ERMDP1A4	
	94	(80 - 120) 1.8 (0-25)		SW846 6010B		01/16-01/17/02 ERMDP1A5	
		Dilution Factor: 1					
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088	
		MS Run #.....: 2016183					
Cadmium	102	(80 - 120)		SW846 6010B		01/16-01/17/02 ERMDP1A6	
	99	(80 - 120) 3.2 (0-25)		SW846 6010B		01/16-01/17/02 ERMDP1A7	
		Dilution Factor: 1					
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088	
		MS Run #.....: 2016183					
Chromium	112	(85 - 120)		SW846 6010B		01/16-01/17/02 ERMDP1A8	
	107	(85 - 120) 1.9 (0-25)		SW846 6010B		01/16-01/17/02 ERMDP1A9	
		Dilution Factor: 1					
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088	
		MS Run #.....: 2016183					
Beryllium	99	(80 - 120)		SW846 6010B		01/16-01/17/02 ERMDP1CA	
	97	(80 - 120) 1.9 (0-25)		SW846 6010B		01/16-01/17/02 ERMDP1CC	
		Dilution Factor: 1					
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088	
		MS Run #.....: 2016183					

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000045

**MATRIX SPIKE SAMPLE EVALUATION REPORT**

**TOTAL Metals**

Client Lot #...: E2A150272

Date Sampled...: 01/14/02 12:30 Date Received..: 01/14/02 17:46

Matrix.....: SOLID

PARAMETER	PERCENT	RECOVERY	RPD	METHOD	PREPARATION~	WORK
	RECOVERY	LIMITS	RPD		ANALYSIS DATE	ORDER #
Lead	94	(80 - 120)		SW846 6010B	01/16-01/17/02	ERMDP1CD
	94	(80 - 120) 0.48 (0-25)		SW846 6010B	01/16-01/17/02	ERMDP1CE
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID....: 021088
		MS Run #.....: 2016183				
Selenium	86	(70 - 115)		SW846 6010B	01/16-01/17/02	ERMDP1CF
	86	(70 - 115) 0.65 (0-25)		SW846 6010B	01/16-01/17/02	ERMDP1CG
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID....: 021088
		MS Run #.....: 2016183				
Silver	92	(80 - 120)		SW846 6010B	01/16-01/17/02	ERMDP1CH
	94	(80 - 120) 1.5 (0-25)		SW846 6010B	01/16-01/17/02	ERMDP1CJ
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID....: 021088
		MS Run #.....: 2016183				
Cobalt	99	(80 - 120)		SW846 6010B	01/16-01/17/02	ERMDP1CK
	110	(80 - 120) 8.3 (0-25)		SW846 6010B	01/16-01/17/02	ERMDP1CL
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID....: 021088
		MS Run #.....: 2016183				
Copper	105	(80 - 120)		SW846 6010B	01/16-01/17/02	ERMDP1CM
	101	(80 - 120) 1.6 (0-25)		SW846 6010B	01/16-01/17/02	ERMDP1CN
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID....: 021088
		MS Run #.....: 2016183				
Molybdenum	93	(80 - 120)		SW846 6010B	01/16-01/17/02	ERMDP1CP
	92	(80 - 120) 1.1 (0-25)		SW846 6010B	01/16-01/17/02	ERMDP1CQ
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID....: 021088
		MS Run #.....: 2016183				
Nickel	95	(80 - 120)		SW846 6010B	01/16-01/17/02	ERMDP1CR
	93	(80 - 120) 1.6 (0-25)		SW846 6010B	01/16-01/17/02	ERMDP1CT
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID....: 021088
		MS Run #.....: 2016183				

(Continued on next page)

**000046**

**MATRIX SPIKE SAMPLE EVALUATION REPORT**

**TOTAL Metals**

**Client Lot #....:** E2A150272

**Matrix.....:** SOLID

**Date Sampled...:** 01/14/02 12:30 **Date Received..:** 01/14/02 17:46

PARAMETER	PERCENT	RECOVERY	RPD	METHOD	PREPARATION-	WORK
	RECOVERY	LIMITS	RPD LIMITS		ANALYSIS DATE	ORDER #
Thallium	92	(75 - 125)		SW846 6010B	01/16-01/17/02	ERMDP1CU
	91	(75 - 125)	1.1 (0-25)	SW846 6010B	01/16-01/17/02	ERMDP1CV
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088
		MS Run #.....: 2016183				
Vanadium	109	(80 - 120)		SW846 6010B	01/16-01/17/02	ERMDP1CW
	106	(80 - 120)	1.6 (0-25)	SW846 6010B	01/16-01/17/02	ERMDP1CX
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088
		MS Run #.....: 2016183				
Zinc	115	(80 - 120)		SW846 6010B	01/16-01/17/02	ERMDP1C0
	114	(80 - 120)	0.41 (0-25)	SW846 6010B	01/16-01/17/02	ERMDP1C1
		Dilution Factor: 1				
		Analysis Time...: 19:01		Instrument ID...: M01		Analyst ID.....: 021088
		MS Run #.....: 2016183				
<b>MS Lot-Sample #:</b> E2A140199-001 <b>Prep Batch #....:</b> 2016402						
Mercury	110	(80 - 120)		SW846 7471A	01/16-01/17/02	ERMDP1C5
	102	(80 - 120)	5.4 (0-20)	SW846 7471A	01/16-01/17/02	ERMDP1C6
		Dilution Factor: 1				
		Analysis Time...: 19:10		Instrument ID...: M04		Analyst ID.....: 000023
		MS Run #.....: 2016185				

**NOTE(S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

N Spiked analyte recovery is outside stated control limits.

NC The recovery and/or RPD were not calculated.

**000047**

## MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC Volatiles

Client Lot #...: E2A150272 Work Order #...: ERN8M1A2-MS Matrix.....: SOLID  
MS Lot-Sample #: E2A150272-001 ERN8M1A3-MSD  
Date Sampled...: 01/15/02 11:00 Date Received..: 01/15/02 16:40 MS Run #....: 2017163  
Prep Date.....: 01/16/02 Analysis Date...: 01/16/02  
Prep Batch #...: 2017362 Analysis Time...: 12:33  
Dilution Factor: 1 Analyst ID.....: 001464 Instrument ID...: G13

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
TPH (as Gasoline)	96	(70 - 140)			SW846 8015B
	96	(70 - 140)	0.17	(0-40)	SW846 8015B
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>			
a,a,a-Trifluorotoluene (TFT)	112			(60 - 130)	
	112			(60 - 130)	

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print denotes control parameters**

000043

MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC/MS Volatiles

Client Lot #...: E2A150272 Work Order #...: ERN9A1A2-MS Matrix.....: SOLID  
MS Lot-Sample #: E2A150278-001 ERN9A1A3-MSD  
Date Sampled...: 01/10/02 12:40 Date Received...: 01/15/02 16:40 MS Run #:....: 2021104  
Prep Date.....: 01/19/02 Analysis Date...: 01/19/02  
Prep Batch #:..: 2021322 Analysis Time...: 02:49  
Dilution Factor: 1 Analyst ID.....: 9999998 Instrument ID...: MSD

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>RPD LIMITS</u>	<u>METHOD</u>
1,1-Dichloroethene	93	(65 - 150)	0.81	(0-30)	SW846 8260B
	94	(65 - 150)			SW846 8260B
Benzene	96	(70 - 130)	3.6	(0-30)	SW846 8260B
	92	(70 - 130)			SW846 8260B
Trichloroethene	102	(70 - 135)	3.3	(0-30)	SW846 8260B
	98	(70 - 135)			SW846 8260B
Toluene	91	(70 - 130)	5.6	(0-30)	SW846 8260B
	86	(70 - 130)			SW846 8260B
Chlorobenzene	90	(70 - 130)	6.4	(0-30)	SW846 8260B
	84	(70 - 130)			SW846 8260B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>LIMITS</u>
	<u>RECOVERY</u>		
Bromofluorobenzene	80		(65 - 135)
	82		(65 - 135)
1,2-Dichloroethane-d4	88		(60 - 140)
	89		(60 - 140)
Toluene-d8	86		(70 - 130)
	85		(70 - 130)

**NOTE (S)**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print** denotes control parameters

000043

## MATRIX SPIKE SAMPLE EVALUATION REPORT

## GC Semivolatiles

Client Lot #...: E2A150272      Work Order #...: ERN9W1A2-MS      Matrix.....: SOLID  
**MS Lot-Sample #:** E2A150278-005      ERN9W1A3-MSD  
 Date Sampled...: 01/14/02 16:10      Date Received...: 01/15/02 16:40      MS Run #.....: 2016128  
 Prep Date.....: 01/16/02      Analysis Date...: 01/16/02  
 Prep Batch #: 2016317      Analysis Time...: 19:53  
 Dilution Factor: 1      Analyst ID....: 356074      Instrument ID..: G02

<u>PARAMETER</u>	<u>PERCENT</u>	<u>RECOVERY</u>	<u>RPD</u>	<u>LIMITS</u>	<u>METHOD</u>
	<u>RECOVERY</u>	<u>LIMITS</u>	<u>RPD</u>	<u>LIMITS</u>	
<b>TPH (as Diesel)</b>	71	(55 - 130)			SW846 8015B
	81	(55 - 130)	1.3	(0-35)	SW846 8015B

<u>SURROGATE</u>	<u>PERCENT</u>	<u>RECOVERY</u>
	<u>RECOVERY</u>	<u>LIMITS</u>
<b>Benzo(a)pyrene</b>	76	(60 - 130)
	83	(60 - 130)

NOTE (S) :

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

000050

MATRIX SPIKE SAMPLE EVALUATION REPORT

## HPLC

Client Lot #...: E2A150272 Work Order #...: ERN9W1A4-MS Matrix.....: SOLID  
MS Lot-Sample #: E2A150278-005 ERN9W1A5-MSD  
Date Sampled...: 01/14/02 16:10 Date Received..: 01/15/02 16:40 MS Run #....: 2016156  
Prep Date.....: 01/16/02 Analysis Date..: 01/18/02  
Prep Batch #...: 2016374 Analysis Time..: 03:27  
Dilution Factor: 1 Analyst ID....: 033077 Instrument ID..: LC7

<u>PARAMETER</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>	<u>RPD</u>	<u>LIMITS</u>	<u>METHOD</u>
Acenaphthene	75	(50 - 150)			SW846 8310
	75	(50 - 150)	0.46	(0-50)	SW846 8310
Acenaphthylene	81	(50 - 150)			SW846 8310
	75	(50 - 150)	8.4	(0-50)	SW846 8310
Anthracene	73	(50 - 150)			SW846 8310
	69	(50 - 150)	6.0	(0-50)	SW846 8310
Benzo (a)anthracene	85	(50 - 150)			SW846 8310
	85	(50 - 150)	0.02	(0-50)	SW846 8310
Benzo (a)pyrene	79	(49 - 107)			SW846 8310
	81	(49 - 107)	1.8	(0-53)	SW846 8310
Benzo (b)fluoranthene	80	(50 - 150)			SW846 8310
	81	(50 - 150)	0.62	(0-50)	SW846 8310
Benzo (ghi)perylene	80	(50 - 150)			SW846 8310
	81	(50 - 150)	1.6	(0-50)	SW846 8310
Benzo (k)fluoranthene	80	(50 - 150)			SW846 8310
	83	(50 - 150)	2.9	(0-50)	SW846 8310
Chrysene	84	(50 - 150)			SW846 8310
	84	(50 - 150)	0.47	(0-50)	SW846 8310
Dibenz (a, h)anthracene	72	(50 - 150)			SW846 8310
	72	(50 - 150)	1.2	(0-50)	SW846 8310
Fluoranthene	78	(50 - 150)			SW846 8310
	75	(50 - 150)	3.4	(0-50)	SW846 8310
Fluorene	60	(43 - 112)			SW846 8310
	53	(43 - 112)	12	(0-56)	SW846 8310
Indeno (1, 2, 3-cd)pyrene	80	(54 - 114)			SW846 8310
	81	(54 - 114)	0.92	(0-51)	SW846 8310
Naphthalene	74	(44 - 110)			SW846 8310
	67	(44 - 110)	11	(0-50)	SW846 8310
Phenanthrene	71	(50 - 150)			SW846 8310
	65	(50 - 150)	8.0	(0-50)	SW846 8310
Pyrene	82	(49 - 115)			SW846 8310
	79	(49 - 115)	3.3	(0-54)	SW846 8310
<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>			
1-Methylnaphthalene	81				(41 - 115)
	73				(41 - 115)

**NOTE (S) :**

Calculations are performed before rounding to avoid round-off errors in calculated results.

**Bold print** denotes control parameters

000051